

P.F.

A

WAY TO GET WEALTH:

CONTAINING
Six Principal VOCATIONS, or CALLINGS, In
which every good *Husband* or *House-wife* may lawfully
Imploy themselves.

A S,

- I. The Natures, Ordering, Curing, Breeding, Choice, Use and Feeding of all sorts of Cattel and Fowl, fit for the Service of Man: As also the Riding and Dieting of Horses, either for War or Pleasure.
- II. The Knowledge, Use and Laudable Practice of all the Recreations meet for a *Gentleman*.
- III. The Office of a House-wife, in Physick, Chirurgery, Extraction of Oyles, Banquets, Cookery, Ordering of Feasts, Preserving of Wine, conceited Secrets, Distillations, Perfumes, Ordering of Wool, Hemp, Flax, Dying, Use of Dayries, Maulting, Brewing, Baking: and the Profit of Oats.
- IV. The Inrichment of the Weald in *Kent*.
- V. The Husbanding and Inriching of all sorts of barren Grounds, making them equal with the most fruitful: With the Preservation of Swine. And a Computation of Men and Cartels Labours, &c.
- VI. The making of Orchards, Planting and Graffing, the Office of Gardening, and the Ornaments, with the best Husbanding of Bees.

The first Five Books gathered by *G. M.* The last by Master
W. L. for the Benefit of *Great Britain*.

The Fourteenth time Corrected and Augmented by the Author.

L O N D O N,

Printed by T. B. for *Hannah Sawbridge*, at the Bible on *Ludgate-Hill*, 1683.

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30 JUNE 1915

ОПЛАТНО

Six Principal VOCATIONS, or CALLINGS, in

I enjoy the book.

2 A

I, The undersigned, hereby certify that the above is a true and correct copy of the original as the same appears in the records of the Department of the Interior, Bureau of Land Management, Washington, D.C.

11. The knowledge, learned and laudable, justice of all the Representatives.

[illegible]

92360

IV. The Development of the World in 1900.

W. The Hubbard and Lathrop of all kinds of better goods and
 and then some with the most

2000-2001

...the Government of the United States...

THE LIBRARY OF THE UNIVERSITY OF CHICAGO

Wm. L. ...

1911

... ..

from the red edges
CHEAP and GOOD
HUSBANDRY,
FOR

The well-Ordering of all Beasts and Fowls,
and for the general Cure of their Diseases.

Containing the Natures, Breeding, Choice, Use, Feeding and
Curing of the Diseases of all manner of Cattel, as Horse, Oxe, Cow,
Sheep, Goats, Swine and tame Conies.

Shewing further the whole Art of Riding Great Horses, with
the breaking and ordering of them, and the Dyeting of the Running,
Hunting and Ambling Horse, and the manner how to use them in their
Travel.

Also, approved Rules for the Cramming, and fatting all sorts
of Poultry and Fowls, both tame and wild, &c. And divers good and
well approved Medicines, for the Cure of all the Diseases in Hawks, of
what kind soever.

Together with the Use and Profit of Bees, the manner of
Fish-Ponds, and the taking of all sorts of Fish.

Gathered together for the general Good and Profit of the
Common-wealth, by exact and assured Experience from English pra-
ctices, both certain, easie and cheap; differing from all former and
forraign Experiments, which either agreed not with our Climate, or were
too hard to come by, or over-costly, and to little purpose; all which
herein are avoided. Newly Corrected and Enlarged with many Ex-
cellent Additions.

The Fourteenth Impression.

L O N D O N,

Printed by T.B. for *Hannah Sawbridge*, at the Bible on
Eudgate-Hill, MDCLXXXIII.

CHEAT and GOOD HUSBANDRY

FOR
The well Ordering of all Affairs and Towns

and for the general Good of the Nation
Containing the Nature, Breeding, Choice, Use, and
Curing of the Diseases of the Country, and
the Diseases of the Towns, and the
Shewing further the whole Art of Raising, and
the Breeding and Ordering of them, and the
Planting and Amending of them, and the
Use of them.

All approved Rules for the Ordering and Raising of all
of Country and Town, and the Use of them, and
well approved Medicines for the Cure of all the Diseases of the
with a kind Preface.

Together with the Use and Profit of Bees, the manner of
the same, and the Ordering of all sorts of Fish.

Gathered together for the general Good and Profit of the
Commonwealth by exact and careful Experience from the
Books, both ancient and modern, and the Use of them, and
forming an Appendix which sheweth not only the Use of them, but
too the Remedies for the same, and the Use of them, and the
herein are avoided: Newly Corrected and Enlarged with many
valuable Additions.

The Forenamed Imperfections

L O N D O N
Printed by T.B. for Humphrey Sawbridge, at the Bible on
Ludgate-Hill, MDCLXXIII.



TO THE
RIGHT HONOURABLE
AND

Most enobled with all Inward and outward

VERTUES,
RICHARD SACKVILE,

Baron of Buckhurst and Earl of Dorset, &c.

Although the monstrous shapes of Books (Right Honourable and best enobled Lord) have, with their disguised and unprofitable Vizard-like Faces, half-veiled your Honour, yet I beseech you to turn your self from that ancient Defence and Patronage, which in former ages most Nobly be employed, to preserve them from Envy: Yet so much I know, the largeness of your Worthy Breast is endued with Wisdom, Courage and Bounty, that notwithstanding the vanities of our ignorant Writers, you will be pleased out of your Noble Spirit, favourably to behold whatsoever shall bring a publick good to our Country, at which end I have only aimed in this small Book: in which, though I have run far from the way of other Writers in this nature, yet I doubt not but your Honour shall find my path more easie, more certain, & safe than any, nay by much less difficult or dangerous to walk in. I must confess, something in this nature I have formerly

The Epistle Dedicatory.

formerly published, as namely of the Horse only, with whose Nature and Use I have been exercised and acquainted from my Childhood, and I hope, without boast, need not yield to any in this Kingdom: Yet in this Work, I hope your Lordship, and all other Princely maintainers of that worthy and serviceable Beast, shall find, I have found out, and herein explained, a nearer and more easie course for his preservation and health, than hath hitherto been found or practised by any but my self only: whatsoever it is, in all humbleness I offer it as a sacrifice of my Love and Service to your Honour, and will ever whilst I have breath to be

Your Honours

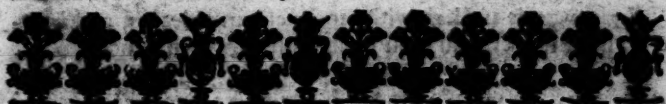
in all dutiful Service,

G. M.

TO THE
Courteous READER.

THERE is no Artift, or man of Indu-
ftry (courteous and gentle Reader)
which mixeth Judgment with his
Experience, but findeth in the travel
of his Labours better and nearer
courses to make perfect the beauty
of his work, than were at first presented to the eye of
his knowledge: for the Mind being pre-occupied, and
bused with a virtuous search, is ever ready to catch
hold of whatsoever can adorn or illustrate the Excel-
lency of the thing, in which it is employed; and
hence it hapneth, that my self, having seriously be-
fowed many years to find out the truth of these know-
ledges, of which I have treated in this Book, have
now found out the infallible way of curing all diseases
in Cattle; which is by many degrees more certain,
more easie, less difficult, and without all manner of
cost and extraordinary charges, than ever hath been
published by any home-born or forreign practicer.
Wherein (friendly Reader) thou shalt find that my
whole drift is to help the needful in his most want and
extremity. For having many times in my journeying,
seen poor and rich-mens Cattle fall suddenly sick,
some travelling by the way, some drawing in the
Plough or Draught, and some upon other Employ-
ments;

ments; I have also beheld those Cattel or Horses dye,
e're they could be brought either to a Smith, or other
places where they might receive Cure: Nay, if with
much pains they have been brought to the place of
Cure, yet have I seen Smiths so unprovided of Apothe-
caries Simples, that for want of a matter of six pence
a Beast hath dyed worth many Angels. To prevent this
I have found out those certain and approved Cures,
wherein if every good Horse-lover, or Husbandman,
will but acquaint his knowledg with a few Herbs, or
common Woods, he shall be sure in every Field, Pa-
sture, Meadow, or Land-furrows, nay almost by eve-
ry high-way side, or blind Ditch, to find that which
shall preserve and keep his Horse from all suddain ex-
tremities. If thou shalt find benefit, think mine hours
not ill wasted; if thou shalt not have occasion to ap-
prove them, yet give them thy gentle passage to o-
thers, and think me, as I am,
Thy Friend,
G.M.



A short Table expounding all the hard words in
this Book.

A

A *Uri-pigmentum*, or *Orpiment*, is a yellow hard substance to be bought at the Apothecaries.

Aristolochia-longa, otherwise called red *Madder*, is an Herb growing almost in every field.

Aristolochia-rotunda, is the Herb called *Galingale*.

Agrimony, or *Egrimony*, is an usual and known Herb.

Anemoe, *Comin royal*, is an Herb of some called *Balswort*, *Bishops-weed*, or *Herb-William*.

Anise, is that Herb which bears *Anise-seeds*.

Aver, of some called *Dill*, is an Herb like *Fennel*, only the seeds are broad like *Orange-seed*.

Agnus-Castus, of some called *Tulesain*, is an Herb with reddish leaves, and sinewy, like *Plantane*.

Egyptiacum, is a Reddish *Unguent*, to be bought at the Apothecaries, and is soveraign for *Fistulaes*.

Assifatida, a stinking strong Gum, to be bought at the Apothecaries.

Adraces, or *Adarces*, is that Salt which is ingendred on the Marshes, by the violence of the Suns heat after the tide is gone away.

Asterion, is an herb growing amongst stones, as on walls, or such likes, it appeareth by night, it hath yellow flowers like Fox-gloves, and the leaves are round and blewish.

Aloes, is a bitter Gum, to be bought at the Apothecaries.

B

B *Eten*, or *Beets*, is an Herb with long broad leaves indented, and grows in hedge-rows.

Bale-armenick, is a red hard earthly substance, to be bought at the Apothecaries, and is of a cold and binding nature.

B

Broom-

A Table of hard words.

Broomwort, is an Herb with brown coloured leaves, and beareth a blew flower, and most commonly grows in Woods.

Cresses, are of two kinds, *Water-cresses*, and *Land-Cresses*: they have broad smooth leaves, and the first grows in moist places, the later in Gardens, or by high-waies.

Cumin, see *Ameos*.

Carthamus, is an Herb in taste like *Saffron*, and is called *bastard-Saffron*, or *Mock-Saffron*.

Calamint, is an ordinary Herb, and groweth by Ditches sides, by high-waies, and sometimes in Gardens.

Coriander, is an Herb which beareth a round little seed.

Chives, are a small round Herb growing in Gardens, like little young *Onions*, or *Scallions*, not above a week old.

D

Dipente, a soveraign powder made of five equal simples, as *Bay-berries*, *Ivory*, *Aristolochia-rotunda*, *Myrrhe*, and *Gentiana*, may be bought of the Apothecary.

Betony, is an Herb called *Pepper-wort*, or *Horse-radish*, and grows in many open fields.

Dragon, is an Herb common in every Garden.

E

Elicampane, is an Herb of some called *Horse-helm*, and grows almost in every field, and every Garden.

Eye-bright, is an Herb common in every Meadow.

F

Fenugreek, is an Herb which hath a long slender trailing stalk, hollow within, and sown in Gardens, but easiest to be had at the Apothecaries.

Fernsmund, is an Herb of some called *Water Fern*, hath a triangular stalk, and is like *Polypody*, and it grows in Bogs and hollow grounds.

G

Alingale, see *Aristolochia-rotunda*.

H

Horse-mint, is an Herb that grows by water sides, and is called *Water-mint*, or *Brook-mint*.

Horse-Helm, see *Elicampane*.

Houfe

A Table of hard words.

House-leek, is a weed which grows upon the tops of houses that are thatcht, and are like unto a small *Harichoke*.

Heerb Robert, hath leaves like *Heerb Bennet*, and small flowers of purple colour, and grows in most common fields and Gardens.

I

Ivory, is the shaving of the *Elephants* tooth, or the old *Harts* or *Stags* horn, being the smooth white thereof.

K

Not-grass, is a long round weed, with little round smooth leaves, and the stalks very knotty and rough, winding and wreathing one seam into another very confusedly, and groweth for the most part in very moist places.

L

Estuce, is a common sallet in every Garden.

Lolium, is that weed which we call *Cockel*, and groweth amongst the corn in every field.

Liverwort, is a common Herb in every garden.

M

Ayrb, is a Weed that grows among corn, and is called of some *Hogs-fennel*.

Myrrhe, is a Gum to be bought at the Apothecaries.

Man-drake, is an Herb which grows in gardens, and beareth certain yellow Apples, from whence the Apothecaries draw a soveraign Oil for broken bones.

N

Nepe, see *Calamint*.

O

Oreganum, is an Herb called *Wild-Marjerom*, and grows both in open fields, or in low Copses.

Orifice, is the mouth, hole, or open passage of any wound or ulcer.

Opoponax, a Drug usual to be bought at the Apothecaries.

P

Pitch of Burgundy, is *Rosen*, and the blacker the better.

Plantane, is a fat leaf and sinewy, growing close to the ground, and it is called *Whay-bred* leaf.

Plin-roral, is an Herb that groweth both in fields and gardens, and is best when it flowreth.

A Table of hard words.

Patch-grease, it is that tallow which is gotten from the boiling of Shoo-makers threads.

Q^Q*uinque-folio*, of some called *Cinque-foile*, is that Herb which is called *Five-leaved Grass*.

R^R*Ed-Oker*, is a hard red stone, which we call *Raddle*, *Orell*, *Marking-stone*.

S^S*Elendine*, or *Tetterwort*, is a Weed growing in the bottome of Hedges, which being broke, a yellow juice will drop and run out of it.

Sherwis, is an Herb with many small leaves, and grows most in Gardens.

Stubwort, is an Herb which grows in woody places, and is called *Wood Sorrel*.

Sanguis Draconis, is a hard red Gum to be bought at the Apothecaries.

Sperma Ceti, is the seed of the *Whale*, excellent for inward bruises, and to be bought at the Apothecaries.

Stonecrop, is a green Weed growing on the tops of walls.

Sal-armoniack, is a Drug to be bought at the Apothecaries.

T^T*Ustilaginis*, is that Weed which we call *Colts-foot*.
Triapharmacum, a composition made of three simples, and to be bought at the Apothecaries.

Turn-merrick, is a yellow Simple: of strong flavour, to be bought at the Apothecaries.

V^V*Erdigrease*, is a green fatty Gum drawn from Copper; and is to be bought at the Apothecaries.

W^W*ood-rose*, or *Wild Eglantine*, is that small thin flower, which grows upon Briars in Woods or Hedges.

Y^Y*arrow*, is an Herb called the *Water Violet*, and grows in Lakes or Marsh grounds.

THE GENERALL CURE AND ORDER-
 ing of all Horſes : As alſo the whole Art of Riding great
 Horſes ; with the breeding, breaking, and ordering
 of them ; Together with the manner how to
 uſe the running, hunting, and ambling
 Horſe, before, in, and after their
 Travel.

CHAP. I.

*Of the Horſe in general, his choiſe for every ſeveral Uſe, his Or-
 dering, Diet, and beſt preſervation for health, both in Travel, and
 in Reſt.*

THE full ſcope and purpoſe of this work, is in few, plain,
 and moſt undoubted true words to ſhew the Cure of
 all manner of diſeaſes belonging to all manner of neceſ-
 ſary Cattel, nourished and preſerved for the uſe of man,
 making by way of demonſtration, ſo eaſie and plain a paſſage, to
 the underſtanding and accompliſhment of the ſame, that not the
 ſimpleſt which hath priviledge to be eſteemed no Idiot; nor the
 pooreſt, if he can make two ſhillings; but ſhall both underſtand
 how to profit himſelf by the Book, and at the cheapeſt rate pur-
 chaſe all the receipts and ſimples declared in the whole Volume.
 For in ſober truth this Book is fit for every Gentleman, Hus-
 bandman, and good mans pocket, being a memory which a man
 carrying about him will, when he is call'd to account, give a
 man full ſatisfaction, whether it be in the Field, in the Town,
 or any other place where a man is moſt unprovided.

And now ſoſmuch as the Horſe of all Creatures is the nobleſt, ſtrongeſt, and apteſt to do a man the beſt and wortheſt ſervices both in Peace and Warre, I think it not amiſs firſt to
 Nature of Horſes.
 begin

begin with him. Therefore of his nature in general : he is valiant, strong, and nimble, and above all other beasts most apt and able to indure the extreamest labours, the moist quality of his composition being such, that neither extrem heat doth dry up his strength, nor the violence of cold, freeze the warm temper of his moving spirits; but that where there is any temperate government, there he withstandeth all effects of sickness, with an uncontrouled constancy. He is most gentle and loving to the Man, apt to be taught and not forgetful when an impression is fixed in his brain. He is watchful above all other beasts, and will endure his labour with the most empty stomach; he is naturally given to much cleanliness; is of an excellent scent, and offended with nothing so much as evil favours.

The choice of
Horses, and
their shapes.

Now for the choice of the best Horse, it is divers, according to the use for which you will employ him. If therefore you would have a Horse for the Warres, you shall chuse him that is of a good tall stature, with a comely lean head, an out swelling forehead, a large sparkling eye, the white whereof is covered with the eyebrows, and not at all discerned, or if at all, yet the least is best; a small thin ear short and pricking; if it be long, well carried and ever moving, it is tolerable; but if dull or hanging, most hateful: a deep neck, large crest broad breast, bending ribs, broad and streight chine, round and full bottock, with his huckle-bones hid, a tayle high and broad, set on neither too thick; nor too thin; for too much hair shews sloath, and too little, too much choller and heat: a full swelling thigh, a broad, flat, and lean leg, short pastern'd, strong joynted, and hollow bones, of which the long is best, if they be not wier'd, and the broad round the worst.

Colours of
Horses.

The best colours are Brown-bay, Daple-gray, Roan, Bright-bay, Black, with a white near foot behind, white far foot before, white rache, or white star, Chestnut or Sorrel, with any of those marks, or Dun with a black list: And of these horses, for the Wars, the Courser of Naples is accounted the best, then the *Almota*, the *Sardinian*, or the *French*.

Horses for a
Princes Seat.

If you would chuse a Horse for a Princes Seat, any supreme Magi-

Magistrate, or for any great Lady of State, or woman of eminence, you shall chuse him that is of the finest shape, the best rein, who naturally bears his head in the best place, without the help of the mans hand; that is of nimblest and easiest pace, gentle to get upon, bold without making affrights, and most familiar and quiet in the company of other Horses: his colour would ever be milk-white, with red frains, or without, or else fair dapple gray with white Mane, and white Tayle: And of these the *English* is best, then the *Hungarian*, the *Smeasland*, the *Poland*, the *Irish*.

If you will chuse a Horse only for travel, ever the Better shape the better hope, especially look that his head be lean, eyes swelling outward, his neck well risen, his chine well risen, his joynts very strong, but above all his patterns short and straight, without bending in his going, and exceeding hollow and tough hoofs: let him be of a temperate nature, neither too furious, nor too dull, willing to go without forcing, and not desirous to run when there is no occasion.

If you would chuse a Horse for hunting, let his shape in general be strong, and well knit together, making equal proportions, for as unequal shape shew weakness, so equal members assure strength and indurance. Your unequal shapes are a great head to a little neck, a big body to a thin buttock, a large limb to a little foot, or any of these contraries, or where any member suits not with the whole proportion of the body, or with any limb next adjoining. Above all let your hunting Horse have a large lean head, wide nostrils, open chauld, a big weasand, and the wind-pipe straight, loose, well covered, and not bent in the pride of his Reining: The *English* Horse, bastardized with any of the former Races first spoke of, is of all the best.

If you chuse a Horse for running, let him have all the finest shape that may be; but above all things, let him be nimble, quick and fiery, apt to fly with the least motion; long shapes are sufferable, for though they shew weakness, yet they assure sudden speeds. And the best Horse for this use, is the *Arabian*, *Barbary*, or his bastard, Jennets are good, but the Turks are better.

Coach-Horse.

If you will chuse a Horse for the Coach, which is called the swift draught, let his shape be tall, broad, and well furnisht, not grosse with much flesh, but with the bignesse of his bones, especially look if he have a strong neck, a broad breast, a large chine, sound clean limbs, and tough hooves: and for this purpose, your large English Geldings are best, your Flemish Mares next, and your strong Ston'd Horses tolerable, *Flemish* or *Frisons*.

Pack-horses.

If you will chuse a Horse for Portage, that is for the Pack or Hampers, chuse him that is exceeding strong of Body and Limbs, but not tall, with a broad back, out ribs, full shoulders and thick withers; for if he be thin in that part, you shall hardly keep his back from galling: be sure that he take a strong stride with his feet, for their pace being neither trot nor amble, but only a foot pace, he which takes the largest strides goes at the most ease, and rides his ground fastest.

Cart-horses.

Lastly, if you will chuse a Horse for the Cart or Plough, which is the slow draught, chuse him of the most ordinary height, for Horses in the Cart unequally sorted, never draw at ease, but the tall hang up the low Horse. Let them be of good strong portion, big breasted, large bodied, and strong limb'd, by nature rather inclin'd to crave the whip, than to draw more than is needful. And for this purpose Mares are most profitable; for besides the effecting of your work, they yearly bring forth increase: therefore if you furnish your draught with Mares to breed, observe in any wise, to have them fair fore-handed, that is good neck, breast, and shoulders; for the rest it is not so regardful, only let her body be large, for the bigger room a Foal hath in the dams belly, the fairer are his members. And above all things observe never to put your draught beasts to the Saddle, for that alters their pace, and hurts them in their labours.

Of Mares.

Now for the ordering of these several Horses: first for the Horse for service, during the time of his teaching, which is out of the Wars, you shall keep him high and lustily; his food, no Straw but good Hay, his provender clean dry Oats, or two parts Oats, and one part Beans, or Pease, well dried and hard, the quantity of half a peck at watering, morning, noon, and evening, is sufficient.

In his dayes of rest, you shall dresse him betwixt five and six in the morning, water betwixt seven and eight, and feed from nine till after eleven. In the afternoon, you shall dresse betwixt three and four, water betwixt four and five, and give provender till six, then litter at eight, and give food for all night. The night before he is ridden, you shall at nine of the clock at night take away his hay from him; at four of the clock in the morning give him a handfull or two of Oats, which being eaten, turn him upon his Snaffle, rub all his body and legs over with dry cloths, then saddle him, and make him fit for his exercise. Soon as he is call'd for to be ridden, wash his Bit in fair water, and put it into his mouth with all other things necessary, draw up his girths, and see that no buckles hurt him: then lead him forth, and as soon as he hath been ridden, all sweating as he is, lead him into the stable, and first rub him quickly over with dry wisps, then take off his saddle, and having rubb'd him all over with dry cloaths, put on his housing-cloath, then set on the Saddle again, and girt it: then lead him forth, and walk him up and down in gentle manner an hour or more, till he be cold, then set him up, *and after two or three hours fasting*, turn him to his meat: then in the afternoon, curb, rub, and dresse him, then water him, and order him as is aforesaid.

For ordering of the Horse for a Prince, or great Ladies seat, *Ordering of*
 let it be in his time of rest like unto the horse for service: and in his *Horses for a*
 time of labour like the travelling horse, as shall be shew'd instantly: *Princes seat.*
 only because he is to be more choicely kept, I mean in the beautiful-
 est manner, his coat lying smooth, and shining, and his whole body
 without any stain or ill-favouredness; you shall ever when he hath
 been ridden, and cometh in much sweating, presently have
 him into the Stable, and first rub him down with clean wisps,
 then taking off his Saddle, with a Sword-blade whose edge is
 rebated; you shall stroak his neck and body clean over, leaving
 no sweat nor filth that can be gotten out; then cloath him up, and
 set on the Saddle, and walk him forth as aforesaid. After, order and
 diet him as you do other travelling Horses: dry Oats is his best
 Provender if he be fat and full, and Oats and beans if he be poor,
 or subject to loose his flesh quickly.
 For your travelling Horse, you shall feed him with the finest
 Hay

Ordering of
travelling hor-
ses.

hay in the Winter, and the sweetest grass in Summer. His Provender will be dry Oats, Beans, Pease or bread, according to his stomach: in the time of rest, half a peck at a watering is sufficient; in the time of his labour as much as he will eat with a good stomach. When you travel, water him two hours before you ride, then rub, dress, and lastly feed: then bridle up, and let him stand an hour before you take his back. Travel moderately in the morning till his wind be rackt, and his limbs warmed, then after do as your affairs require. Be sure at night to water your horse two miles before you come to your journeys end, then the warmer you bring him to his Inn, the better: walk not, nor wash not at all, the one doth beget colds, the other foundring in the feet or body: but set him up warm, well stopt, and soundly rub'd with clean litter. Give no meat whilst the outward parts of your horse are hot or wet with sweat, as the ear-roots, the flanks, the neck, or under his chaps: but being dry, rub and feed him according to the goodness of his stomach. Change of food begetteth a stomach, so doth the washing of the tongue or nostrils with vinegar, wine and salt, or warm urine. Stop not your horses forefeet with Cows dung, till he be sufficiently cold, and that the blood and humours which were disperfed, be settled into their proper places. Look well to his back, that the saddle hurt not, to the girths that they gall not, and to his shooes that they be large, fast, and easie.

**Ordering of
hunting horses.**

For the ordering of your Hunting-Horse, let him in the time of his rest have all the quietness that may be, much litter, much meat, and much dressing, water ever by him, and leave him to sleep as long as he pleaseth. Keep him to dung rather soft than hard, and look that it be well coloured, and bright, for darkness shews grease, and redness inward heating. After exercises, let mashes of sweet mault be his usual scourings; and let bread of clean beans, or beans and wheat equall mixt, be his best food, and beans and oats the most ordinary.

**Ordering of
running horses.**

For the ordering of your running Horse, let him have no more meat than to suffice nature, drink once in four and twenty hours, and dressing every day once at Noon only. Let him have much moderate exercise, as Morning and Evening Airings, or the fetching of his water, and know no violence but in his courses only.

Let:

Let him stand dark and warm, have many cloaths, and much litter, being wheat-straw only. If he be very fat, scour oft; if of reasonable state, scour seldom; if lean, then scour but with a sweet mash only. Be sure your horse be empty before he course, and let his food be the finest, lightest, and quickest of digestion that may be: the sweats are more wholsom that are given abroad, and the cooling most natural which is given before he come into the stable. Keep his limbs with cool oynments, and by no means let any hot spices come into his body. If he grow dry inwardly, wash'd meat is very wholsom. If he grow loose, then give him straw in more abundance. Burning of sweet perfume in the stable is wholsom, and any thing you either do about your horse, or give unto your horse, the more neat, cleanly, and sweet it is, the better it nourisheth.

For ordering the Coach horse, let him have good dressing twice a day, Hay and Provender his belly full, and Litter enough to tumble on, and he cannot chuse but prosper. Let him be walkt and washt after travel, for by reason of their many occasions to stand still, they must be inur'd to all hardness, though it be much unwholsom. Their best food is sweet Hay, and well dried Beans and Oats, or Bean-bread. Look well to the strength of their shooes, and the galling of their harness. Keep their legs clean, especially about the hinder feet-locks, and when they are in the house, let them stand warm cloathed.

Ordering of
Coach-horses.

For the ordering of the Pack-horse, or the Cart-horse, they need no washing, walking, or hours of fasting; onely dress them well, look to their shooes and backs, and then fill their bellies, and they will do their labour. The best food is sweet Hay, Chaff, or Pease, or Oat-hulls and Pease, or chopt Straw and Pease mixt together; once a week to give them warm Grains and Salt, is not amiss, for their labour will prevent the breeding of worms, or such like mischiefs.

Ordering of
the Pack and
Cart-horse.

Now for the general preservation of horses health, it is good whilst a horse is in youth and strength to let him blood twice in the year, that is, beginning of the Spring, & beginning of the Fall, when you may best afford him a weeks rest. After you have let him blood, two dayes after give him a comfortable drench, as 2 spoonfuls of *Diapente*, or such like, which is called, *Horse-Milbride*.

For the pre-
servation of all
Horses.

date, in a quart of strong Ale. Use oft to perfume his head with Frankincense, and in the heat of Summer use oft to swim him. Let a fat Horse drink oft, and a little at once, and a lean Horse whensoever he hath appetite. Much rubbing is comfortable, and cheareth every member. Be sure to let your Horse eat graſs once in a year, for that cooleth the blood, scours away gross humours, and gives great strength and nourishment to the body. If notwithstanding all these principles your Horse fall into sickness and disease, then look into the Chapters following, and you shall find the trueſt, beſt approved, and the moſt familiar medicines for all manner of infirmities, that ever were known or published except my Maſter-piece.

CHAP. II.

Of Riding in general, and of the particular Knowledges belonging to the Art of Riding of a great Horse, or Horse for Service,

HAVING spoken something already of Horses; it now follows, we say something of the commendable exercise of riding great Horses, which in the very action it self speaketh Gentleman, to all that are performers or doers of the same. And though our English Gentry from a sloath in their industry, aim for the most part at no more skill than the riding of a ridden and perfect Horse, which is but only the setting forth of another mans vertue, and thereby making themselves richer in discourse than action: yet our English Husbandman, or good-man, whom I seek to make exact, and perfect in all things, shall not only create himself by Riding the Horses whom the other men have made perfect, but shall by his own practise bring his Horse from utter ignorance, to the beſt skill that can be desired in his motions: wherein he shall find a two-fold pleasure, the one an excellent contentment to his mind, that he can perform so worthy an action, without the chargeable assistance of others, and the other a healthful support to his body, when by such recreation his spirits

The pleasure of riding.

Spirits and inward-faculties are revived and inflamed.

But now me thinks, I hear some say, that I have utterly taken away the tune of this string, I have stricken so oft upon it, and that indeed there can be no delight where there is no variation: and that surely I cannot vary any more upon this plain Song, but the world would find discord either in this, or my former descants. But let them not deceive themselves, for my building standeth on a firm Rock, and I know both shall be worthily justifiable: only this I must inform all men, that in times past, long since, when our first rules of Horsemanship were given unto us, our Masters were not so skilful in the abilities of Horse-performances as we are, but measur'd them by the proportions of their own weaker natures, and thence became so too much tender over them, that they respected neither the greatness of their own labours, nor the length of time before they arrived to their desires, so in the end they might aspire to their wishes with safety and full satisfaction: whence it comes to pass, that in those times, and even now in these, chiefly among those which are merely Riders, and no Keepers, there is no less time allowed to the making of a perfect Horse, than two years; when we know, and my self from Experience can justify the same, that if the Rider can Keep as well as Ride, that is, give as well directions for the preservation of a Horses health, and the avoidance of Sorances and lickness, as put in practice artfully, every violence to be used in his Lessons, he may very well make up a perfect Horse in three months, fit either for pleasure or battel, which is the full scope and end of this Treatise: wherein I would not have any man expect either new Rules, or contradiction of any already set down by men of practice, and knowledge in the Art, but only a straightning or drawing of them together into a much narrower compass, giving satisfaction to our desires, and finishing up our work with speed, which before was almost lost or neglected with the length of our labours, as you shall fully perceive by this discourse which followeth.

First then, to speak of the taming of a young Colt, which is as it were the preface or introduction to the art of Riding; you shall after he hath been in the house a week or a fortnight, and is familiar with the man, and will withall patiently indure currying, The taming of a young Colt.

His sadling and
bridling.

rying, combing, rubbing, clawing and handling in every part and member of his body, without any shew of rebellion or knavithness, which you shall compass by all gentle and easie means, doing nothing about him suddenly or rashly, but with leisure and moderation. Then you shall offer him a Saddle, which you shall set in the manger before him, that he may smell to it, and look upon it, and you shall gingle the girths and stirrops about his ears, to make him careless of the noise, then with all gentleness after you have rubb'd his sides therewithall, you shall set it on his back, and gird it gently on, and then place his Crooper with all ease, which done, you shall take a sweet watring trench, wash'd, and anointed with honey and salt, and put it into his mouth, placing it to hang directly about his tush, and as it were a little leaning thereupon: this you shall do in the morning as soon as you have drest him, and then thus saddled and bridled, you shall lead him forth, and water him in your hand abroad: then bringing him in, and after he hath stood a little reined upon his trench an hour or more, take away the bridle and saddle, and let him go to his meat till the evening: then lead him forth as before with the saddle to the water, then when he is set up gently, take off his saddle and cherish him, and then drest him, and cloath him up for all night.

The first back-
ing.

The next day saddle and bridle him as before said, and put on him a strong musclet of writhen Iron, or a sharp Cavezan and Martingal, which you shall buckle at such length, that he may no more but feel it when he jerketh up his head, and then lead him forth into some new plowed field, or soft ground; and there after you have made him trot a good space about in your hand, and thereby taken away from him all his wantonness and knavish distractions, you shall offer your foot to the stirrop; at which if he shew any distaste either in body or countenance, you shall then course him about again, then offer again, and with leisure rise half way up, and go down again; at which if he shrink, correct him as before, but if he take it patiently, then cherish him, and so mount into the Saddle, which done, after cherishing light down again, and give him bread or grafs to eat: then look that your Girths be well girted and streight, that the Crooper be strong and of just length, that the Bridle hang even and in his due place, with-

without inward or outward offence, that your stirrups be fit, and generally all things, without offence either to your self or to the beast, and then as before, mount his back, seat your self just and even in the Saddle, make the reins of your Bridle of equal length, carry your rod without offence to his eye in your right hand, the point either directly upright, or thwarted towards your left shoulder: then having cherisht him, let the Groom which before led him, having his hand on the Chaff-halter, lead him forward a dozen or twenty paces, then gently straining your hand, with the help of the Foot-man make him stand still, then cherish him, and lead him forward again, and do this five or six times one after another, till by continual use you make him of your own accord, (without the foot-mans help) by giving your body, and thrusting your legs forward, go forward; which as soon as he doth; you shall stay him, and cherish him, and then sitting on his back, let your foot-man lead him home, and bring him to the block, where after you have cherisht him, you shall gently alight, and cause him to be set up, and well drest, and meated. The next day you shall bring him forth as before, and in all points; take his back, as aforesaid, and so by the help of the foot-man, trot fore-right half a mile at least; then let the foot-man lay off his hand, and walk by him, till you have of your self trotted him forth another half mile, then cherish him, and make the foot-man give him some grass or bread to eat, and then taking a large compass, trot him home, and bring him to the block as before, and there alight, and so set him up.

The third day let your foot-man light upon some fair Jade, and then bringing your Colt to the block, take his back gently, and after you have cherisht him, the other riding before you, follow him forth-right a mile, ever and anon at the end of twenty or thirty score stopping the Colt gently, cherishing him, and making him yeild, and go back a step or two, and then putting him forward again, till he be so perfect, that with the least motion he will go forward, stop and retire, which will be effected in two days more; in which space if he chance at any time to strike or rebel, you shall make him which rides before you, take the spare Reyn, an lead him forward, whilst you give him two or three good lashes under the belly, and then being in his way, take the spare

spare reyn to your self again : and thus you shall do, till all faults be amended : then you shall spare your Horseman, or Guide, and onely by your self for three or four dayes more, trot him every morning and afternoon, at least a mile or two forward, using him onely to stop or retire, and bringing him home a contrary way to that you went forth, till he be so perfect and willing, that he will take his way, how or in what manner your self pleaseth, ever observing to mount and dismount at the block only, except some special occasion constrain you to the contrary.

This you may very well bring to pass the first week of the Horses riding.

The three
main points of
a Horsemans
skill.

As soon as you see your Horse will receive you to his back, trot fore-right, stop, and retire, and do all this with great patience and obedience; you shall then call into your mind the three main points of a Horsemans knowledge, which are helps, corrections, and cherishings. And for helps, they consist in these: first the voice, which soundeth sharply and cheerfully, crying, *via, bow, hey*, and such like, adds a spirit and liveliness to the Horse, and lends a great help to all his motions: then the bridle, which restrained, or at liberty, helps him how to do, and shews which way to do.

Then the Rod, which being only shewed, is a help to direct; being only moved, helps the quickness and nimbleness of the motion; and being gently toucht withall, helps the lostriness of a Horses salts and leaps, and makes him as it were gather all his strength into one point; and lastly, the calves of the legs, Stirrop-Leathers, and stirrops, which moved by the horses side, helps him to the nimbleness, swiftness, and readines in turning. Some to these helps adde the help of the Spur, chiefly in high salts or boundings, but it must be done in a just and true time, and with such gentle bitterness, that the Horse may understand it for a help, or else he will take distaste, and finding it favour like correction, in stead of bettering his doings do with more disorder, as to spraul with his fore-feet in advancing, to yerk out with one or both his hinder feet in the corveit or bounding, shaking of his head and such like, as will appear in practise.

Of Corrections,
and which
they be.

Now of Corrections, the most principal is the Spur, which must

must not at any time be given triflingly or itchingly, but soundly and sharply, as oft as just occasion shall require: then the Rod which upon disorder, sloth or miscarriage of the members, must be given also soundly: then the voyce which being delivered sharply and roughly, as *ba villain, carrido, diablo*, and such like threatnings terrifieth the Horse, and maketh him afraid to disobey: And lastly, the Bridle which now and then stricken with a hard check in his Mouth, reformeth many vices and distemperatures of his Head: yet this last must be done seldome, and with great discretions; for to make a Cusome thereof, is the ready way to spoyle a Horses Mouth.

Now of Cherishings, there are generally in use but three, as Of cherishing. first the voyce, which being delivered smoothly and lovingly, as crying, *boll a so boy, there boy there*, and such like, gives the Horse both cheerfulness of Spirit, and a knowledge that he hath done well; then the hand by clapping him gently on the Neck or Bu tock, or giving him Grasse, or other Food to eat, after he hath pleased you: and lastly the big end of the Rod, by rubbing him therewith upon the withers or maine, which is very pleasing and delightfull to the Horse.

Now after these ordinary and usual helps, corrections, and cherishings, you shall have respect to the Musrole or Cavezen & Martingale, which carry in them all the three former both several and unite, for it is first an especial help and guide to every well disposed Horse, for setting of his head in a true place, forming of his Rein, and making him appear comely and gallant in the Eyes of the beholders; then it is a sharp correction when a Horse yerkech out his Nose, or disordereth his Head any way, or striveth to plunge or run away with his Rider: And lastly, it is a great cherishing unto the Beast, when he yieldeth his Head to your hand, by shrinking from his Face, and so leaving any more to torment him, but when he offendeth: whence it comes that more from this than any thing else, the Horse first gaineth the knowledge of his Masters will, and is desirous to perform it: therefore you shall be very careful to the placing of this upon the Horse; as first that it hang somewhat low, and rest upon the tender Grissel of the Horses Nose, whereby corrections may be the sharper when occasion require it: then that it be loose

Of the Musrole and Martingale.

and not fraight, whereby the Horſe may feel; upon the yielding in of his Head how the offence goeth from him, and ſo know that only his own diſorder is his own puniſhment. Eaſily, he ſhall be carefull to note how he winneth the Horſes Head; and thoſe degrees to draw his Martingale ſtraiter and ſtraiter, ſo as the Horſe may ever have a gentle feeling of the ſame, and no more; till his Head and Rein be brought to that perfection that you deſire, and then there to ſtay, and keep the Martingale conſtantly in that place only, which you ſhall perform in thoſe few days which you trot your Horſe forth-right, being before you bring him to any Leſſon, more then the knowledge of your ſelf, and how to receive you to his back, and trot forth obediently with you.

Of treading
the large ring,

Choice of
ground,

When your Horſe is brought unto ſome certainty of Rein, will trot forth-right with you at your pleaſure, & by your former exerciſe therein is brought to breath and delight in his travell, *which will grow and increaſe upon him, as you grow and increaſe in your labour*, then you ſhall bring him to the treading forth of the large Rings in this manner: Firſt, *if he be of heavy and ſluggiſh nature, and ſloathful and dull, and albeit he have ſtrength and ſufficiency of Body, yet you find him ſlovenly and unapt, then you ſhall trot him in ſome new plowed field, ſoft and deep: But if he be of quick and of a fiery Spirit, apt, nimble, and ready to learn, then you ſhall trot him in ſome ſandy or gravelly place, where is ſtrong and firm foot hold; and there you ſhall mark out a ſpacious large Ring, at leaſt threeſcore or fourſcore paces in compaſſ, and having walked him fix or ſeven times about the ſame on your right hand, you ſhall then by a little ſtraightning of your right Rein, and laying the Caſſe of your left Leg to his ſide making a half circle within your Ring upon your right hand, down to the center or mid-poynt thereof, and then by ſtraightning of your left Rein a little, and laying the Caſſe of your right Leg to his ſide, making another half circle to your left hand from the center to the outmoſt verge, which two half circles contrary turned, will make a perfect Roman S. within the Ring; then keeping your firſt large circumference, walk your Horſe about on your left hand, as oft as you did on your right, and then change within your Ring as you did before to your right hand again, and then trot him firſt on,*

on the right hand, then on the left, ſo long as you ſhall think convenient, and although our ancient Maſters in this Art have preſcribed unto us certain numbers of Ring turns, and how oft it is meet to go about on either hand, as if all Horſes were of one even ability; yet I would wiſh you neglect thoſe Rules, and only to praſtiſe your Horſe in this Leſſon, according to his ſtrength of his Body, ſometimes applying him therein an hour, ſometimes two, and ſometimes three, more or leſs according to your diſcretion: for the ſpace of time can neither bring wearineſs nor tiring; and for your change of hands, you ſhall do it as oft as ſhall ſeem beſt to your ſelf, being ever very careful to give him the moſt exerciſe, and that hand on which he is ever moſt unwilling to go; and in this Leſſon be careful alſo that he do it cheerfully, luſtily, nimbly, quickning and inflaming his Spirits by all means poſſible, and when you find that he will trot his large Rings perfectly, which will queſtionleſs be in leſs then a weeks ſpace, being well applied therein, for you muſt not fore-ſlow any morning except the Sabbath, hardly any afternoon alſo, if you find him ſloathful and heavy, for there is no greater hinderance then the Riders too much tenderneſs, nor no greater furtherance then a continual moderate exerciſe. Therefore as I ſaid when he will trot his Rings well, then in the ſame manner, and with the ſame changes, you ſhall make him gallop the ſame Rings, which he ſhall do alſo with great dexterity, lightneſs, and much nimbleneſs, without loſing the leaſt part or grace of his beſt Rein: Nay, ſo careful you ſhall be thereof, that in his gallopping, you ſhall as it were gather his body together, and make his Rein rather better then it was, and make him take up his Feet ſo truly and loſtily, that not any Eye may ſee or perceive a falſhood in his ſtroke, but that his inward Feet play before his outward, and each of a ſide follow the other ſo directly, that his gallop may appear as the beſt grace of all his motions: neither ſhall you enter him into this Leſſon raſhly and haſtily, but ſoberly, and with diſcretion, making him firſt gallop a quarter of the Ring, then half, then three parts, and laſtly the whole Ring: neither ſhall you force him into his Ring with violence or the ſharpeſs of Spurs, but with Spirit and Mettal, making him by the lightneſs and cheerfulneſs of your own Body,

Of Gallopping
large Rings.

pass of his own accord into his gallop, and especially in his changes, where you may let him feel your Legge, and shew him your Rod on the contrary side : and herein is to be noted, that continually those changes (in as much as they are made in : much straighter compass) must be done ever with great quickness, and more stirring nimbleness then entire lessons.

Helps in the
large Ring-
turns.

Now for the helps necessary in these large Ring-turns, they consist generally in the *Voice*, *Rod*, *Calves* of your Legs, and the *Bridle* ; In the *Voice* by quickning him up, and reviving his Spirits when he grows sloathful, with these words, *How hey*, or *viz* : In the *Rod*, by shewing it him on the contrary side, or laying it on the contrary Shoulder, and sometimes by shaking it over his Head, which is a kind of threatening, chiefly when you make you changes. In the Calves of your Legs, when you clap them hard to the contrary side to which he turneth, or springing and jerking your Legs forward, hard upon your Stirrop leathers, which will quicken him and make him gather up his Limbs better than the spur by many degrees ; And lastly, in the Bridle, by drawing it in a little straiter, and holding it with some more constancy, when you put any of your former helps in use, or do any thing with more life or courage, for that maketh him draw his Limbs together, and so straiten his Rings with gracefully comeliness.

Corrections in
the Ring-
turns.

For the Corrections in these large Rings, they be divers ; as namely, the Bridle, the Spur, and the Rod, and sometimes the voice, yet that but seldome ; for the Bridle, you shall correct your Horse therewith if he carry his Head or Chaps awry, making as it were Mouths and ill-favoured countenances, giving him now and then a little check in the Mouth, and awaking him from such forgetful passions, or now and then drawing the trench to and fro in his Mouth, which will reform the errour ; then the Spur which must be laid sharp and hard to his sides, when you find your helps will do no good, but that his sloath rather more and more encrease, or when he presseth and hangeth hard upon your hand or looseth the tutch of his rein, or such like vices ; for the Rod, when you find that he neglecteth the shewing, or shaking of it, or when he disordereth any of his hinder parts and will not gather them up comely together, then you shall therewith give him a sound lash or two under the Belly, or over the contrary Shoulder, and to any of these former Corrections you,

you shall ever accompany the threatning of your voyce, when the fault is too much foul, and no otherwife, because there should be ever entire love betwixt the Horse and the Horse-man which continually chiding will either take away or at least root out the apprehension thereof.

Now for your Cherishings, they are those which I formerly spake of; only they must be used at no time but when your Horse doth well, and hath pleased your mind, both with his cunning and tractableness: although the time for the same be when he hath finished his Lessons, yet there is a secret pleasing and cherishing of a Horse with the Bridle, which must be exercised in the doing of his Lessons, and that is the sweetning of his Mouth by a little ceasing of your Bridle hand, and gently drawing it up back again, letting it come and go with such unperceiving motion, that none but the Beast may know it.

Cherishings
in his Ring-
turns.

When your Horse can trot and gallop your large Rings with all perfectness, which with good industry will be perfected in less than a fortnights exercise, you shall then proceed to make him stop fair, comely, and without danger, which you shall do in this manner: First, as soon as you have taken his back, cherish him, put him gently forward, and bring him into a swift trot: after you have trotted him forty or threescore yards forward, you shall by drawing in your Bridle hand, straightly and suddenly, make him gather his hinder Legs and fore-Legs together, and so in an instant stand still, which as soon as he doth, immediately you shall ease your hand a little, yet not so much as may give him liberty to press forward, but rather to yield backward, which if you find he doth, you shall give him more liberty, and cherish him, and then having paused a while, draw in your Bridle-hand, and make him go back two or three paces, at which if he strike, instantly ease your hand, and draw it up again, letting him come and go till hee yeild, and go backward; which (for the most part) all Horses at the first will do: but if it be that your Horse rebel and will not go back with this gentle admonition, you shall then cause a Footman standing by to put him back with his hand, and in this motion, you shall cherish him, that he may understand what your will is. And thus every time you make him stop, you shall make him retire back, till in one space of time you have made both

Of stopping
and going
back.

Lessons.

Lessons perfect : and this practise you shall use both till you come to your large Rings, and at every time that you finish your Lesson, or give the Horse breath or ease, whereby you shall perceive that your Horse shall learn to trot and gallop the large Rings, to stop and retire back all in one space of time, because you see successively they follow one another, and are to be done (though three) but as one entire Lesson.

Helps.

Now for the helps in these Lessons, the best for stopping is the choice of ground, as by making your Horse ever to stop down the slope of some hill, or descending ground, whereby he may be compell'd to couch his hinder loyns the better, and so make him stop most comely, and to observe that the ground be firm and hard, without danger of sliding, lest the Horse finding such an imperfection grow fearful, and so refuse to do your will out of his own danger. In retiring you shall help him with your Rod, by putting it before his Brest, or shaking it before his Knees, to make him remove his Feet more quick and nimble.

Corrections.

For Corrections in stopping, it must sometimes be done by your self, as with the even stroke of your Spurs, when in his stop he disordered his Head, or with any one single Spur, when he casteth out his hinder loyns, and will not stop right in an even line ; and sometimes it must be done by another by-stander, where he refuseth to stop at all, who standing at the place of stop, as soon as you draw up your hand, shall with his Rod threaten the Horse and make him not dare to press forward, or if he do press forward, to make him retire swiftly back so much ground as he gained, both your self and the by-stander, rating him with your voices extreamly : for corrections in retiring, they are the even strokes of both your Spurs, when he sticks or presses upon your hand, and will not yeild back ; and also your Rod struck sharply on his Knees and Breast, and Rod of a by-stander struck upon his Breast, Knees and Face, when his stubbornness is too violent.

Cherishings.

But for his cherishings, they be all formerly spoke of, when your will is comely and obediently performed, besides the addition of some other, as a present easing of your Bridle hand, and the suffering and cherishing of the by-stander, and so offering him to stand and recover breath a good space after.

When

When your Horſe can ſtop and retire well, which may be done in the ſame ſpace that you teach him his large Ring turns, for it is as it were three Leſſons learn'd in one; you ſhall then teach him to advance before when he ſtoppeth, which is very comely and graceful to the beholders; and you ſhall do it in this manner: After you have ſtopped your Horſe, without giving your hand any eaſe you ſhall lay the Calves of both your Legs hard to his ſides, and add thereto the noiſe of the ſhaking of your Rod, and your voice, by crying *up, up*, which will at firſt (peradventure) but a little amaze him, becauſe he underſtandeth not your meaning: Therefore you ſhall put him forward again, and do as before, and that with a little more ſtrength, continuing the practice of the ſame till you perceive hee taketh one Foot from the earth, then cheriſh him a little, and ſo to the Leſſons again, till hee taketh up both his Legs from the ground, which when he doth, orderly or diſorderly, yet cheriſh him exceedingly, that he may come to the knowledge of your meaning, without which all your labour is loſt; then to your former practice again, till you have brought him to that perfectneſs, that he will with all readineſs advance as oft as you will give him the Calves of your Legs to his ſides, be it leſs or more times together: this done, you ſhall look to the orderly and comelineſs of his advancing: As firſt, that he takes up his Legs both even together, and bend him inward towards his Body; then that he advance not too high (for fear of coming over upon you) but couch his hinder loyns cloſe to the ground; then that he ſprauſeth not, nor paweth with his Feet forward; and laſtly that hee advance not for his own pleaſure, but when you command him by your own direct and orderly motions, for the contrary is a foul fault in Horſemanſhip.

For helps in this Leſſon, they are the Calves of your Legs, the ſhaking of your Rod over his Head, and your voyce, as is before ſaid, and the deſcent of ſome hanging ground, which will make his hinder loyns couch the better.

The Correſtions are according to the nature of offences, as Correſti: na: the even ſtroke of your Spurs, or a good laſh with your Rod, when you ſee, he fixeth his Feet to the ground, and ſtubbornly applies himſelf to diſobey you, or will take up his Feet one after another,

ther, and not both together. If he do advance too high, so as he is ready to come over upon you, or if he sprale or paw forth with his feet, you shall not then only give him both your spurs hard together, but also a good jerke or two with your Rod between his ears: but if he advance when you would not have him, you shall then in the same instant jerke him over both the knees with your Rod; and if he advance again, jerke him again, not ceasing till he fix his feet to the ground, or go backward, and then cherish him.

Cherishings.

For particulars cherishing in this Lesson, they are no other than those former spoke of, onely they must be done with a more ready watchfulness, in the very instant and moment of time, in which he performeth any thing well, that the Horse may understand why, and wherefore he receiveth such contentment, and thereby be encouraged to continue in his goodnes, and be more ready to apprehend his Riders pleasure.

*The use of
advancing.*

For the use of advancing, it is twofold; as namely, to give a grace to his other Lessons, and to bring his Body to nimbleness: yet for the most part it is only us'd at the stop; where when you have finish'd any Lesson, if then concluding with the stop, you make him advance, once, twice or thrice, it will be both a grace to the Beast, and shew much art in the Horseman: also it maketh a Horse apt and ready to turn well, and making him trust to his hinder Legs, whereby his fore parts may be directed and governed at the Horsemans pleasure.

*Of yerking.
behind.*

Next to advancing, you shall teach your Horse to yerke behind, in this manner: When at any time you have made him stop you shall presently with your Rod give him a good jerk under the Belly near to his flanke, which though at the first hee apprehended not, yet by a continuall and constant use thereof you shall in the end bring him to yerke out his hinder Legs, at the first doing whereof, you shall cherish him, for that is the only language by which he knoweth he doth your will, and then having paused a little, make him to do it again, encreasing it every day, and doubling his doings, till he be so ready, that when you please to give the jerke, he will then give the yerke, and then you shall look to the comeliness of his doings, that is to say, that he yerke not out his hinder-Legs, till his fore leg be above the ground

ground then that he yerk not one Leg farther out than the other, but both even together; then that he yerk not too high, and lastly, that he yerk not one Leg out whilest the other is on the ground, all which are errors of great grossness. Therefore to make the Horse more perfect in this Lesson, it shall be good to teach him to yerk out behind, when he standeth in the stable, by jerking him on the buttocks with your Rod, and not ceasing to molest him till he raise up his rump above the ground, and then to cherish him, and so to apply him without any ease and rest, till he doth your will; then when he is perfect to put the same in practise when you are in the field on his back, by turning your Rod in your hand to his Buttock-ward, and touching him therewith, to make him yerk as aforesaid.

For the helps, they are the constant staying of his mouth on the Helps. Bridle, the stroke of your Rod under his belly, or the gentle touching him upon the Rump with the same.

The corrections are only the even stroak of your Spurs, when Corrections. either he refuseth to yerk, or yerketh out disorderly, or out of malice; or the single Spur on that side on which he yerketh out most disorderly: and lastly, a restless holding of him to the Lesson, not giving him any rest or ease, till he doth in that manner which you can wish.

Then for his cherishings, they are all those formerly mentioned, being bestowed upon him in the very instant of his well doing. Cherishings.

When your Horse is perfect in all the Lessons formerly spoke Of Turnings. of, and understandeth the helps and corrections belonging to the same, you shall then teach him to turn readily on both hands, by straitning his large Rings, and bringing them into a much less compass, and although among Horsemen, and in the Art of Horsemanship, there are divers and sundry turns, some high and lofty, as the turn upon the *Corvet*, *Capriole*, or on bounds, some close and near the ground, as the turn *Tarra, Tarra*, or those we call *Aragols*, *Serpelgiare*, and such like; and some swift and flying, as the *Incavellere*, *Chambetta*, and such like; yet sith they all labour but to one end, which is to bring an horse to an exact swiftness and readiness in turning, I will in as brief and plain manner as I can, shew you how to compass the same. First, therefore, you shall make out a Ring, some three or four yards in compass

pass and in the same, with all gentleness a while, walk your Horse, suffering him to go the same at his own pleasure, gathering his head up by little and little, and making him take pleasure in the same, till you find that he taketh knowledge of the Ring, and will with all willingness make about the same, coveting rather to straiten it, than enlarge it; which perceived, you shall then carry your Bridle-hand constant, and somewhat strait, yet the outmost Rein ever somewhat more strait than the inmost, making the Horse rather look from the Ring than into the Ring, and the calf of your leg (as occasion shall serve) somewhat near to the outward side of the Horse, and then you shall trot him about the Ring, first on the one side, and then on the other, making your changes within that strait Ring, as you did before within the large Ring.

In this sort without ceasing, you shall exercise your Horse a full hour together, then stop him, make him advance twice or thrice together, then retire in an even Line, and so stand still a pretty while and cherish him; then when he hath taken fresh breath to him again, and do as before, continually labouring by raising up his Bridle-hand, and thrusting forward your Legs and Body, to bring his trot to all the swiftness and loziness that may be: also making him to lap his outmost Leg, so much over his inmost Leg, that he may cover it more than a foot over, and thus you shall exercise him a whole forenoon at least a week together, only doing his former Lessons but once over in a morning and no more, and in this practise you teach him perfectly three Lessons together, that is the turn, *Terra, Terra*, the *Incaualere*, and the *Chambletta*: the turn *Terra, Terra*, in the outmost circle of the strait Ring, and the *Incaualere* and *Chambletta* in the changes, wherein he is forc'd to lap one leg over another, or else to lift up the inmost leg from the ground, while he brings the outmost over it: and surely in this Ring and these changes consisteth the main art of turning, and the chiefest glory both of the Horse and the Horseman: and therefore it is meet for every Rider to think his Lesson not perfectly learnt, and therefore continually to practise his Horse in the same, making him not onely tread and trot these narrow Rings, but also gallop them, and from galloping

gallopping them to pass them about in ground-falts, as by taking up his Fore-legs from the ground both together, and bringing his hinder feet into their place, and so passing the Ring about once, or twice, or thrice at your pleasure, or as oft as the Horses strength and courage will allow: and this is the true turn, called *Terra, Terra*, and of greatest request with Horsemen, and likewise with Souldiers; and this will every Horse naturally and easily be brought unto, onely by a continual trotting and gallopping of these narrow Rings. Thus you see the perfectness of your large Rings, brings your Horse to an easie use of the strait Rings; and the easie knowledge of the strait Rings brings a Horse to the perfection of turning, which is the grand and main summe of this Art; a stopping begets retiring, and retiring advancing. Thus every Lesson as it were a chain, is linkt one to another.

The helps belonging to turning, are all whatsoever are formerly spoken of, because it is a Lesson, *which besides that it containeth in it self all other Lessons, so it must be done with more courage, Art, and nimbleness, than any Art whatsoever*; and therefore the Horse had need of all assistance that can possibly be given him. Helps.

The corrections are the Spurs given on the outmost side, when the Horse sticks, and is harder to come about on the one side than on the other, and the Rod stricken hard on the outmost side of the offending member, as also a continual labour, when the Horse shews either unwillingness or disobedience touching the unnimbleness of his turning, when he beats one leg against another, or treads one foot upon another, the raps and hurts he doth himself, are sufficient corrections, and will both make him know his fault, and amend it. Corrections.

For his Cherishings, they are also the former already spoken of, yet to be used (if possibly) with greater earnestness, in as much as this Lesson being most cunning, would for the performance thereof ever receive the most comfort. Cherishings.

Your Horse being brought to this perfection, that he will perfectly tread his large Rings, stop, retire, advance before, yerke behind, and turn readily on either hand, you shall then take away his Mussole and Trench, and in stead thereof put upon his Head a gentle Cavezan, or two joynts and three peeces, with a chap-

chap-band underneath, which you shall buckle close, but not straight, and be sure that the Cavezan lye upon the tender gristle of the Horses Nose, somewhat near to the upper part of his Nostrils; then to the chap-band you shall fasten the Martingale, and lastly to the rings on each side the Cavezan you shall fasten long divided reins, more than a yard and a half in length a piece, then into his mouth you shall put a sweet smooth Cannon bit, with a plain watering chain, the cheek being of a large size, so it may arm a little above the point of his shoulder; and the kirble shall be thick, round, and large, hanging loosely upon his neither lip, and enticing the Horse with his lip to play with the same. Thus armed you shall take his back, and casting the left rein of your cavezan over the horses right shoulder, you shall bear it with your thumb, with the reins of the bit in your left hand; and the right reins of the cavezan you shall cast over the Horses left shoulder, and bear it with your Rod in your right hand, and so trot him forth the first morning outright a mile or two in the high way, making him only feel and grow acquainted with the bit, and only making him now and then stop and retire, and gathering up his head in a due place, and fashioning his rein with all the beauty and comeliness that may be; which done, the next day you shall bring him to his large Rings, and as was before shewed, there make him perfect with the bit as you did with the snaffle, first in trotting, then in galloping of the same, then make him stop, retire, advance, yerke behind, and come upon their hand with a great deal more perfectness, and more grace than was formerly done with the trench, which is an easie labour, in as much as the bit is as much better command, and brings more comeliness to the Horses motions, is also a greater help, a sharper correction, and cherisher of more comfort than any before used. And thus in the first moneth you may make any Horse perfect upon the trench in the Lessons before spoke of; so in the second moneth you may make the same Lessons a great deal more perfect upon the bit, and so presume in two moneths to have a perfect ground Horse, fit either for Souldier or Scholar, that hath any good rules of Horsemanship in him.

Of the turning
Post.

Now for as much as the Art in turning in Horses is of great difficulty, and ought of all Lessons to be most elaborate, I will speak

speak a little further thereof, and shew you the practise of these
 present times, for the best accomplishment of the same, without
 stirring up evil motions in the Horse, whence Restiveness, and
 other vile errors do grow; for it is certain, that every Horse
 naturally desireth neither offence, nor to offend; but the rash dis-
 cretions of ignorant horsemen, which will compell a horse to do,
 before he know what, or how to do, is the begetting of those
 evils which are hardly or ever reclaimed; for a horse is like an ill-
 brought-up boy, who having learnt drunkenness in his youth,
 will hardly be sober in his age, and having once got a knavish
 quality, though he be never so much punished for the same, will
 yet now and then shew that the remembrance is not utterly ex-
 tinguished; and for as much as in this Lesson of strait turns, there
 is so much curious hardnes that a horse is most subject to re-
 bel, and learn many evils thereby, therefore to prevent all those
 evils, you shall cause a smooth strong Post to be well ramm'd, and
 fixed in the earth in the midit of the strait Ring, at the very
 point and center thereof, then causing a Foot-man to stand at the
 Post, you shall give him the right rein of your Cavz in, which
 you shall make him hold about the Post, and so walk or trot
 your horse about the same on your right hand as long as you
 please; then taking up the right Rein, give him up the left
 Rein, and do as much upon the left hand, and thus change from
 hand to hand as oft as you shall think convenient, till you have
 brought your horse to the absolute perfection of every turn,
 the Post being such a guide and bound unto the horse, that al-
 beit the horseman were of himself utterly ignorant, yet it is im-
 possible the horse should either disorder or disobey the Riders
 purpose.

When your horse can thus perfectly for every several turn
 either strait, or open with his bit, you shall then teach him to
 manage, which is the only posture for the use of the Sword on
 horseback, and you shall do it in this manner. First, cause
 some by-stander to prick up in the earth two riding Rods, about
 twenty or forty yards or more, as you think good, distant one
 from the other; then walk your horse in a strait turn or Ring
 about the first on your right hand, and so passing him in an e-
 ven furrow down to the other Rod, walk about it also in a nar-

row Ring on your left hand, then thrust him into a gentle gallop down the even furrow, till you come to the first Rod, and there making him (as it were) stop, and advance without any pause or intermission of time; thrust him forward again, beat the turn *Terra, Terra*, about on your right hand, then gallop forth-right to the other Rod, and in the same manner beat the Turn about on your left hand; and thus do as oft as you shall think it convenient for your own practice, and the Horses strength.

Diversities of
Manages.

Now of these manages, our ancient Masters in Horsemanship have made divers kinds, as manage with rest, and manage without rest, manage with single turns, and manage with double turns, which indeed doth rather breed confusion, than understanding in either the Horse or Horseman: Therefore for your better knowledge, I will reduce them only but to two kinds, that is, Manage open, and Manage close: your open Manage, is that which I shewed you before, when you turn *Terra, Terra*, which is the most open of all strait turns: and your close Manage, is when you turn upon the *Incavalere*, or *Chambetta*, which are the closest of all turns, and may be done as before I shewed in a flying manner, even upon one foot, which although it be artful, yet it is not so glorious and safe for the Souldiers practice; only, this you may be most assured of, that when a Horse can manage upon both these turns, he may manage without more instruction upon any other turn whatsoever.

Of the Career.

When your Horse is perfect in the manages before said, you may then pass a *Career* at your pleasure, which is to run your Horse forth-right at his full speed, and then making him stop quickly, suddenly, firm and close on his Buttock: in which Lesson there needeth little instructions, but only some few observations, as first, that you make not your *Career* too long, whereby the Horse may be weakened; or too short, whereby his true wind and courage may be undiscover'd, but competent and indifferent, as about four or fivescore yards at the most: then that you start him gently without a fright: and lastly, that you first give him a little warning with your Bridle-hand, and then stop him firmly and strongly; which place of stop, if it be a little bending downwards, it is a great deal the better. And thus in these Lessons already shewed you, consisteth all the full perfection

fection of a Horse for service in the Wars, which any painful man may bring his Horse well unto, in less than three months: however our Ancients in former times have been blind, and in the same practice have wasted two years, ere they brought into perfection.

Now forasmuch as to the Art of riding belongeth divers other Salts and Leaps, right pleasant and curious to behold; and though not generally used in the Wars, yet not utterly useless for the same; and sith they are many times very needful for the health of man's body, I will by no means abridge our English Husband-man of the same, but proceed to the Lessons, which are meet for Horses of pleasure, of which the first is to make a Horse bound aloft with all his four feet from the ground, and you shall do it in this manner. When you have trotted your Horse forth right a dozen or twenty yards, you shall stop him, aloft, and when he hath advanced once or twice, you shall a little straiten your Bridle-hand, and then give him the even stroke of both your Spurs together hard, which at first will but only quicken and amaze him, but doing it again and again, it will breed other thoughts in him, and he being of spirit and metal (as it is lost labour to offer to teach a Jade such motions) he will presently gather up his body; and either rise little or much from the ground, and presently cherish him, and after some rest, offer him the like again, and thus do till you have made him bound twice or thrice, then make much of him, and do no more for that day; the next day renew his Lesson again, and double his exercise, increasing so day by day, till he come to that perfectness, that he will bound whensoever your Spurs shall command him.

When your Horse can bound perfectly, then you shall teach him the Corvet in this manner: you shall at the corner where two walls joyn together, a little hollow the ground a length or more, and then place a smooth strong Post by the side of the hollowness of a horses length likewise from the wall; then over against the Post fasten an Iron-ring in the wall; this done, ride your Horse into the hollow place, and fasten one of the Reysn of the Cavezan unto the Ring, and the other about the Post, then after you have cherished your Horse, make him advance

advance, by the help of your Calves of your Legs only twice or thrice together; then let him stand still and cherish him, then make him to advance again at least a dozen times together, then rests and after advance twenty or forty times together, daily increasing his advancements as he grows perfect therein, till you perceive that he hath got such a habit therein that he will by no means press forward, but keeping his ground certain, advance both before and behind of an equal height, and keep one just and certain time with the motions of your Legs, neither doing slower nor faster, but all after one manner and leisure: but if you find that he doth not raise his hinder parts high enough, then you shall cause a Footman to stand by you, and as you make him advance before, so the Footman by jerking him gently upon his hinder fillets with his Rod to raise up his hinder parts also; this will bring your Horse in few dayes to a perfect and brave Corvet, so that after you may do it in any place where you please without the help either of Wall or Post, or other by-stander.

Of the Gallop
Galliard.

When your Horse is made perfect in the Corvet, and that he will do it readily and comely, you shall at the end of every third or fourth advancing give him the stroak of your Spurs, and make him bound aloft, then put him to his Corvet again as before, and then make him bound again, and thus at the end of every third advancing, see you make him bound for the length of a Tilt-bar, or an ordinary managing furrow, according to the Horses strength, and this is called the *Gallop galliard*, which if it be taught a Horse along by the side of some wall or smooth Pale, it is so much the better, and a great deal fewer disorders will rise and trouble the Rider.

Of the Capri-
ole.

The next Lesson you shall teach your Horse after the *Gallop galliard* is the *Caprie* or Goats-leap, which is the same manner of motion which the Corvet is, only it is to be done forward, and much ground gained in the Salt, and the Horse is to raise his hinder parts as high, or rather higher than his fore-parts, and to keep rather a swifter than slower time in doing of it; therefore when you teach your Horse to do it, you shall bring him into some hollow furrow, where the ground is a little descending, and turning his Head to the descent, put him into the Corvet temperate and gently, then when you give him the Calves of your

Legs

legs to raise up his fore parts, in the same instant jerk your leg violently forward again, that he may not stick, but carry his hinder-legs after his fore-legs, and let some skilful foot-man standing by your side, jerk the horse over the fillets with his rod, and make him raise up his hinder parts; and thus do without ceasing, till he perform your will nimbly and cunningly, and then forget not to cherish him, and give him all comfort possible. And this lesson and the other which consist of violent and quick faults or leaps, would ever be practised the first in the morning whilest a Horse is fresh and lusty, for to put him to them after his fire-edge is taken away, will but bring him to a loathing of his instruction, or at best to do them but slovenly, heavily, and unwillingly.

There is also another motion which is pleasing to the eye, *Of going aside.* though it be very labour some to the body, which is to make a Horse go side-long of which hand soever the Rider is disposed, and is very necessary in the wars, because it is the avoiding of any blow coming from the Enemy. This motion when you intend to teach your Horse, you shall draw up your bridle hand somewhat strait, and if you determine to have him go aside to your right hand, lay your left Rein close to his neck, and the calve of your left leg close to his side, and as you did in the *Incuvalore*, making him lap or put his left leg over his right, then turning your Rod backward, and jerking him gently on the left hinder thigh, make him bring his hinder parts to the Right side also, and stand in an even line as at the first, then make him remove his fore-parts more than before, so that he may stand, as it were, cross over the even line, and then make him bring his hinder parts after, and stand in an even line again; and thus do till by long practise he will move his fore parts and hinder parts, both together, and go side-long as farie as you please, then cherish him, and if you will have him go towards your left hand, do as you did before, using all your helps and corrections on the right side only. And thus much I think is sufficient to have spoke touching all the several Lessons meet to be taught to any Horse whatsoever, whether he be for service or for pleasure, and which being performed artificially, carefully, and with patience, you may presume your Horse is compleat and per-

perfect, the rather litch no man can find out any invention, or teach any other motion to a Horse, which may be good and comely, but you shall easily perceive, that they are received from some one of these already rehearsed.

Riding before
a Prince.

Now if you shall be called to Ride before a Prince, you must not observe the liberty of your own will; but the state of the person before whom you Ride, and the grace of the horse which you ride; and therefore being come into the riding place, you shall chuse your ground, so that the Person before whom you are to ride may stand in the midst thereof, so as he may well behold both the passage of the Horse to him and from him: then being seated in a comely order, and every ornament about you handsome and decent, you shall put your Horse gently forth into a comely trot, and being come against the Person of state, bow your body down to the crest of your Horse, then raising your self again, pass half a score yards beyond him, and there marking out a narrow Ring, thrust your Horse into a gentle gallop, and give him two or three managing turns, in as short ground as may be, to shew his nimbleness and readinesse: then upon the last turn, his face being toward the great person, stop him comely and close, and make him to advance twice or thrice, then having taken breath, put him into a gallop galliard, and so pass along the length of the even *farrow* with that salt, making him to do it also round about the Ring, then his face being towards the Prince, stop him and give him fresh breath, then thrust him into the *Capside*, now and then making him yerk out behind, yet so as it may be perceived it is your will, and not the Horses malice; and having gone about the Ring with that salt, and his face brought to look upon the Prince, stop him again and give him breath, then drawing nearer to the Prince, you shall beat the turn *Terra Terra*, first in a pretty large compass, then by small degrees straitning it a little and a little, draw it to the very center wherby you may give two or three close flying turns, and then changing your hands undoe all that you did before, till you come to the Rings first largeness, then the Horses face being directed upon the Prince stop him, and put him into a corvet, and in that motion hold him a pretty space, making him to do it first in an even line, first to the right hand, then to the left, now backward

Of the Car-
golo.

ward, then forward again: and thus having performed every motion orderly and comely, bow down your body to the Prince, and so depart.

But if you intend to Ride only for Recreation then you shall mark what Lesson your Horse is most imperfect in, and with that lesson you shall ever when you ride, both begin and end: after it you shall fall to those lessons which are to your self most difficult, and by the practise of them bring your self to a perfectness, then consequently to all other lessons, repeating (as it were) every one over more or less, lest want of use breed forgetfulness, and forgetfulness utter ignorance; but if your Recreation in Riding betyed to any special rules of health, and that your practise therein proceed more from the Commandment of your Physitian than your pleasure, then I would with you in the morning first to begin with a stirring, or rough Lesson, as the gallop galliard, bounding, or such like, which having a little stirred your blood, and made it warm, you shall then calm it again with a gentle manage, or the galloping of large Rings: then to stir your spirits again, to bring the stone down, or procure appetite, pass into the capriole or courers: and then to make quiet those moved parts, set the turn called, Terra, Terra, the Incavalere, and such like. And thus one while stirring your blood, and another while moderately allaying such stirring, you shall give your body that due and proper exercise which is most fit for health, and long life. Many other waies this Recreation may be used, for the good of a mans body, which because particular infirmities must give particular rules how and when to use it, I will at this time speak no further thereof, but refer the exercise to their own pleasures which shall practice the same, and to the good they shall find in the practise.

CHAP. III.

Of the breeding of all sorts of Horses fit for the Husbandmans use.

The minds of men being swayed with many various motions, take delight sometimes to be recreated rather with contemplative delights, then with active pleasures, and there is

To ride for recreation.

strong reason therefore, because disability of body, or affairs of the Kingdome or common-wealth, may take a man from those pre-occupations, which otherwise might stir him to more laborious exercise, and of these contemplative Recreations, I can prefer none before that Gentlemanly and beneficial delight of breeding creatures meet for the use of man, and the good of the Common-wealth, wherein he liveth: and of these breedings I cannot esteem any so excellent, as the breeding of Horses, both for the pleasure we gain thereby in our own particular service; and also for our strength, defence, and tillage of the Kingdome.

The breeding
of Horses.

He therefore that suiteth his recreation to the breeding of horses, must first have respect unto the ground whereon he liveth or injoyeth; for every ground is not meet to breed on, but some too good, some too bad: some too good, because they may be exhausted to a more beneficial commodity, Horses having a world of casualties attending on them, and many years before the true profit doth arise: and some too bad, because the extreame barrenness of the same will deny competent nourishment to the thing bred, and so to the loss of time and profit adde mortality.

Grounds to
breed on.

The grounds then meet to breed horses on, would neither be extreame fruitful, nor extreame barren, but of an indifferent mixture, yield rather a short sweet burthen, then a long, rich and fruitful, it would rather lye high than low, but howsoever firm and hard under the foot; it would be full of Mole-hills, uneven treadings, hills, and much cragginess, to bring Colts to nimbleness of foot, it would have good store of fresh watets, an open sharp ayre, and some convenient covert; and this ground is best, if it be several and inclosed, yet may be bred upon, though it be open, and in common, only some more carefulness to be looked for, a little before, and in time of Foaling. Nay, the grounds which are neither several nor common, are very good also to breed on, and those be your teathering grounds, which we call particular grounds; for though they be proper commonly to one man, yet they are not divided nor eaten otherwise than at the owners pleasure: And these teathering grounds are as good as any grounds for the first nourishing of a Foal, if they be

be amongst Corn-grounds or any grain except pease only.

If you have much ground to breed on, you shall divide it in- Division of
to many pastures, the least and barrenest for your Stallion to grounds.
run with your Mares in, those which have least danger of waters
are for your Mares to foal in, the fruitfulest and of best growth,
for your Mares to give milk in; and the most spacious and une-
venest to bring up your Colts in, after they are weaned.

For the choice of a good Stallion, and which is best for our Choice of Stal-
Kingdome, opinion swayeth so far, that a man can hardly give lions, and
well received Directions: yet surely if men will be ruled by which are best.
the truth of experience, the best Stallion to beget horses for the Wars
is the *Courser*, the *Jennet*, or the *Turkey*, the best for courting and
running is the *Barbary*; the best for hunting is, the *Bastard cour-
ser* begot of the *English*; the best for the Coach is the *Flemish*,
the best for travel or burthen is the *English*, and the best for ease
is the *Irish bobby*.

For the choice of Mares, you shall greatly respect their shapes Choice of
and metalls, especially that they be beautifully fore-handed, for Mares.
they give much goodnes to their Foals; and for their kindes,
any of the Races before spoken of is very good, or any of them
mixt with our true English Races, as *Bastard-courser*, *Mare*, *Ba-
stard-Jennet*, *Bastard-Turk*, *Barbary*, &c.

The best time to put your Stallion and Mares together is in When to put
the middle of *March*, if you have any grass, as you should have them together.
great care for that purpose; and one foal falling in *March*, is
worth two falling in *May*, because he possesseth, as it were, two
winters in a year, and is thereby so hardened, that nothing can
(almost) after impair him, and the best time to take your horse
from the Mares again, is at the end of *April*, or middle of *May*,
in which you shall note, that from the middle of *March*, till the
middle of *May*, you may at any time put your Stallions to your
Mares, and a months continuance is ever sufficient: provided e-
ver, as near as you can, that you put them together in the in-
crease of the Moon: for Foals got in the wane are not accounted
strong or healthful.

For covering of Mares, it is to be done two waies, out of Of covering
hand, or in hand; out of hand, as when the Horse and Mares run Mares.
together abroad, as is before said; or turned loose into some
empty

empty barn for three nights one after another, which is the surest and the safest way for a Mares holding; or in hand, early in a morning, and late at an evening two or three daies together, when you bring the Horse to the Mare, and make him cover her once or twice at a time holding him fast in your hand, and when the act is done, lead him back to the stable; and in this act you shall ever observe, as soon as the Horse cometh from her back, presently to cast a pail of cold water on her hinder parts, or else to chase her swiftly, up and down, for fear, by standing still she cast out the seed, which is very ordinary.

To know if a Mare hold.

To know whether your Mare hold to the Horse or no, there be divers waies, of which the best is by offering her the Horse again at the next increase of the Moon, which if she willingly receive, it is a sign she held not before; but if she refuse, then it is most certain she is sped; or if you powre a spoonfull of cold vinegar into her ear, if she shake only her head, it is a sign she holds; but if she shake head, body and all, then truly it is a sign that she does not hold. Lastly, if after she is covered, you see her scour, her coat grow smooth and shining, and that she doth (as it were) renew and increase in liking, it is a sign she holds; but if she hold at a stay without any amendment, then offer the Horse again for she is not served.

To conceive Male foals.

To make your Mares conceive most male Foals, you shall be sure to keep your Stallion proud, and your Mare poor, that his lust making him, he may only be predominant and chief in the action; many other rules fancy devise, but they are in their ends, and I would by no means have this discourse capable of any uncertainty.

To provoke lust.

If you have any advantage given you by friendship or other wife whereby you may have a Mare at the present very well covered, but your is not yet ready for the horse, you shall in this case to provoke lust in her, give her to drink good store of clarified hony, and new milk mixt together, and then with a bush of nettles all to nettles her privy parts, and then immediately offer her to the Horse.

To keep Mares from barrenness.

To keep your Mares from barrenness, and to make them ever apt to conceive foals, you shall by no means feed too extrem

bour,

hour, for the leaner they are when then they come to take Horse,
the much better they will conceive.

After your Mares have been covered, and that you perceive in
them the marks of conceiving, you shall let them rest three weeks
or a month, that the substance may knit; then after, moderately
labour or travel them, till you see them spring, and then turn them
abroad, and let them run till they foal; for to house them after
is dangerous and unwholesome.

Ordering of
Mares after
covering.

If your Mare be hard of foaling, or will not cleanse after she
hath foaled, you shall take a pint of running water, wherein
good store of fennel hath been boyled, and as much strong, old,
sweet wine, with a fourth part of the best Sallet oyl, and having
mixt them well together, being but luke-warm, pour it into her
nostrils, and then hold and stop them close, that the may strain her
whole body, and it will presently give her ease.

A help for
Mares after
foaling.

As soon as your Mare hath foal'd, you shall remove her into the
best grass you have, which is fresh and unsoiled, to make her
milk spring; and if it be early in the year, you shall have a care
that there be good shelter in the same, and there let her nourish
her foal most part of the summer following.

Ordering of
Mares after
foaling.

As touching the weaning of foals, though some use to wean
them at *Michaelmas*, or *Marilemas* following; out of a supposi-
tion that the winter milk is not good or wholesome, yet they
are much deceived; and if you can by any convenient means,
(saving greater losses) let your foals run with their Dams the
whole year, even till they foal again, for it will keep the
foal better in health, in more lust, and least subject to tender-
ness.

Weaning of
Foals.

When you intend to wean your foals, you shall take them
from their Dams over-night, and drive them into some empty
house, where they may rest; and the Mares be free from their
noises, then on the morning following give to every foal falling
a branch or two of *Seven*, anointed or rold in butter, and then
having fasted two hours after, give him a little meat, as grass
hay, or garbidge of Corn, with some clear water, and do this
three daies together; then seeing that they have forgotten their
Dams, gettethen Cote foals, as you intend to make belindes of
and after their sweetnings are past, put them unto your other Col-
foals.

Ordering after
the weaning.

foals into a pasture provided for them by themselves, and your Filly-foals into another by themselves: which Pastures may either be high Woods, Commons, or such like spacious peeces of ground, where they may run till they be ready for the Saddle.

Gelding of
Colts.

Now, albeit I proportion unto you this manner of gelding of Foals, yet I would have you know that the best and safest way to geld them is, if it may be under the Dam when they suck, as at nine, or at fifteen daies of age, if the stones appear, or else so soon as you can by any means perceive them fall down into the Cod, for then there will be no danger of swelling, or other mischiefs, which commonly attend the action. And thus much touching the breeding of Horses, and the observations due to the same through all the courses and passages thereof, as hath been found by ancient practise and experience, as appears in my *Master-piece*.

CHAP. IV.

Of Horses for travel, and how to make them amble.

THe Husbandman, whose occupation in the general affairs of the Common-wealth, as some to the market, some to the City, and some to the seats of Justice, must necessarily be employed almost in continual travel; and therefore it is meet that he be provided ever of a good and easie travelling horse.

The marks of
a good travelling Horse.

The marks whereby he shall chuse a good travelling horse, are these: he shall be of a good colour and shape, lean headed & round foreheaded, a full eye, open nostril, wide jawed, loose thropled, deep neckt, thin crested, broad breast, flat chinn'd, out ribb'd, clean limb'd, short joynted, strong hoofed, well mettall'd, neither fiery nor craving, strong in every member, and easie to mount and get up upon; he shall follow with halting, and stand still when he is restrained.

To make a
Horse amble.

Now forasmuch as there are a world of good horses which are not easie, and a world of easie horses which are not good, you shall by these directions following, make any horse amble whatsoever: first, then you shall understand that practise hath made divers men believe that divers waies they can make a horse amble

Divers wayes
of Ambling.

amble, as by gagging them in the mouths, by toying them in deep earth, by the help of shooes, by galloping and tying, or such like, all which are ill and imperfect; yet the truth is, there is but one certain and true way to compass it, and that is to make a strong Garth-web, flat and well quilted with cotten, four pasterms for the smalls of his fore-legs, under his knees, and for the smalls of his hinder-legs somewhat below the Crayin-joints: to these pasterms you shall fix strong straps of Leather, with good Iron Buckles to make shorter or longer at pleasure, and having placed them about his fore-legs, you shall take two severall round ropes of an easie twist, made with strong loops at either end, and not above eight handfuls in length, and these, the horse standing to a true proportion, you shall fasten to the four straps of leather, to wit, one of them to his near fore-leg, and his near hinder-leg, and the other to his far fore-leg, and his far hinder-leg, which is called amongst horsemen, Trammelling; with these you shall let him walk in some inclosed piece of ground, till he can so perfectly go in the same, that when at any time you offer to chase him, you may see him amble swiftly and truly: then you shall take his back and ride him with the same Trammels at least three or four times a day till you find that he is so perfect that no way can be so tough and uneven, as to compell him to alter his stroke or go unnimble. This done, you may first take away one Trammel, then after the other, and onely wreath about under his fore-feet locks thick and heavy, great Roles of Hay, or Straw, Of whipping, ropes, and so ride him with the same a good space after, for it will make him amble easie, then cut them away, and ride and exercise him without any thing but the ordinary help of the bridles, and there is no doubt but he will keep his pace to your full contentment and pleasure.

Now during this time of your teaching, if your horse strike not a large stroak, and over-reach enough, then you shall make the Trammel the straiter; but if he over-reach too much, then you shall give it more liberty: and herein you shall find that an inch straitnings, or an inch enlarging, will adde or abate at least half a foot, an whole foot and direct stroak. And thus much touching the teaching of any horse to amble, of what nature or quality so ever he be, or how unapt, or untoward, soever to learn.

Of Trammel-
ling.

Of whipping.

CHAP. V.

Of the ordering and dieting of the Hunting-Horse,

Some love hunting for the exercise of their own bodies, some for the Chase they hunt, some for the running of the Hounds, and some for the training of their horses, whereby they may find the excellency of their goodness and indurance. To him therefore which placeth his delight in the goodness of his horse, I would wish him to order and diet him, and he shall most assuredly come to the true knowledge of the best worth which is within him. And if in these Rules which I now shew, I be less curious than formerly I have been, let no man wonder thereat, but know that time (which is the mother of experience) doth in our labours shew us more new and more nearer wayes to our ends, than at first we conceived. And though when I first practised this Art, I knew not how to bring a very fat horse from *Michaelmas* till *Christmas*, to shew his utmost perfection, I know now in two months (though never so foul) how to make him for any wager, daring now boldly to adventure on that, at which before I thought almost present death to offer; thus doth observation and labour find out the darkest secrets in Art.

Taking up of
the Hunting
Horse.

To Begin then with the first ordering of a Hunting-horse, you shall know, that the best time to take him from grass is about *Barbolmeis-ide*, they begin fair, dry, and pleasant, and as soon as he is taken up, to let him stand all that night in any wast house to empty his body, the next day stable him, and give him Wheat-straw if you please, but no longer in any wise; for though the old rule is to take up horses bellies with straw, yet it straitneth the Guts, heats the Liver, and hurteth the Wind: therefore let only moderate exercise, as riding him forth to water morning and evening, and other ayings do what you expect straw should; and for his food let it be hay that is sweet though rough; and either old; or at least well sweat in the Mow.

Cloathing the
Horse.

After his belly is emptied, you shall cloath him first with a single cloath, whilst the heat indureth, and after with more, as you shall see occasion require, and when you begin to cloath the horse, then you shall dress, curry, and rub him also. Now for as much as it is a rule with ignorant Horsemen, that if they have but

but the name of keeping a Hunting-horse, they will with all care (without any reason) lay many cloaths upon him, as if it were a special Phylick, you shall know they are much deceived therein, and may sooner do hurt than good with multiplicity of cloaths; therefore to cloath a horse right; cloath according to the Weather, and the temper of his body; and thus if you see your horse be sleight, smooth, and well coloured, then cloath him temperately, as with a single cloath of Canvase or Sack-cloth at the most; and if then as the year grows colder, you find his hair rise or stare about his neck, flanks, or outward parts, then you shall adde a woollen cloath, or more if need require, till his hair fall smooth again, holding it for your rule, That a rough coat shews want of cloath, and a smooth coat cloathing enough; yet if your horse have been clean fed, taken exercise sufficient, and hath not much glut within him, if then you find that in the night he sweateth in his cloaths, then it is a sign he is over-fed; but if he be foul inwardly, or hath no sweat formerly, and now sweats coming to good feeding, then you shall augment rather than diminish any cloathing for his foulness but then breaketh out, and being evacuated, he will come to dryness of body again, and so continue all the year after; and surely for an ordinary proportion of cloaths, I hold a Canvase cloath, and a cloath of Housewives Woollen to be at full sufficient for a Hunting-horse.

A Hunting-horse would be drest in his dayes of rest, twice a day, that is, before he go to his morning watering, and before he go to his evening watering. For the manner of his dressing after he is uncloathed, you shall first curry him from the tips of the ear to the felling on of his tail, all his whole body most entirely over with an Iron comb, his leggs under the knees and cambrels only excepted; then you shall dust him, then curry him again all over with a round brush of Bristles, then dust him the second time, then rub all the loose hairs away with your hands wee in clean water, and so rub till the horse be as dry as at the first, then rub all his body and limbs over with an hair-cloath. Lastly, rub him over with a fine white linnen Rubber, then pick his eyes, nostrils, sheath, cods, tuell, and feet very clean, and so cloath him, and stop him round with wisps, if you water within the

Of dressing the
Hunting Horse.

Of watering
the Hunting
Horse.

house; or otherwise saddle him after his body is wrapt about in a Woollen cloath; and so ride him forth to the water.

The best water for a hunting-horse, is either a running River, or a clear Spring, remote from the Stable a mile, or a mile and a half at most; and neer unto some plain piece of ground, where you may scope and gallop after he hath drunk; and as soon as you bring your horse to the water, let him take his full draught without trouble or interruption: then gallop and scope him up and down a little, and so bring him to the water again, and let him drink what he please, and then gallop him again: and thus do, till you find he will drink no more: then having scop'd him a little, walk him with all gentleness home, and there cloath him up, stop him round with great soft wisps, and so let him stand an hour upon his bridle, and then feed him.

Of feeding
the Hunting
Horse.

To speak first for the food for hunting-horses, the most ordinary is good sweet sound Oats, either throughly dryed with age, or else on the Kiln, or in the Sun, and if your horse be either low of flesh, or not of perfect stomach, if to two parts of those Oats you add a third part of clean old Beans, it shall be very good and wholesome; and if your horse be in diet for a Match, and have lost his stomach, if then you cause the Beans to be spelted upon a Miln, and so mixt with Oats, it will recover him. The next food, which is somewhat stronger and better, is Bread thus made; take two Bushel of good clean Beans, and one bushel of Wheat, and grind them together; then through a fine Range boule out the quantity of two pecks of pure meal, and bake it in two or three loaves by it self, and the rest sift through a Meal-sieve; and knead it with water and good store of Barm, and so bake it in great loaves, and with the courser bread feed your horse in his rest, and with the finer against the dayes of sore labours. Now for the hours of his feeding it shall be in the morning after his coming from water, an hour after high-noon, after his coming from his evening water, and at nine or ten of the clock at night upon the dayes of his rest; but upon the dayes of his exercise, two hours after he is throughly cold in wardly and outwardly, and then after according as before mentioned. Lastly, for the proportion of food, you shall keep no certain quantity, but according

according.

according to the horses stomach, that is to say, you shall feed him by a little at once, so long as he eats with a good appetite; but when he begins to trifle or fumble with his meat, then to give him no more. Now for his Hay, you shall see that it be dry, short, uplandish hay; and so it be sweet, respect not how coarse or rough it is, sith it is more to scour his teeth, and cool his Stomach, then for nourishment expected from it.

Touching the horses exercise, which is only in the following of the bounds, you shall be sure to train him after those which are most swift and speedy; for so you shall know the truth, and not be deceived in your opinion. Touching the dayes, it shall be twice a week at least, but most commonly thrice. As for the quantity of his exercise, it must be according to his foulness or cleanness: for if he be very foul, you must then exercise moderately to break his grease: if half foul, half clean, then somewhat more to melt his grease: and if altogether clean, then you may take what you please of him (provided, that you do nothing to discourage his spirits, to abate his mettle, or to lame his limbs) and after every dayes exercise, be assured either to give him the same night, or the next day following, something by way of scouring; or otherwise to take away the Grease formerly melted, by means wherof you shall be ever sure to keep your horse in all good health and perfection.

The exercise of the Horse.

The best and most excellent way to scour or purge your horse from all grease, glut or filthiness within his body, which is a secret hitherto was never either sufficiently taught, or perfectly learned, is to take of Anniseeds three ounces, of Cumminseeds six drams, of Caribamus a drag and a half, of Fenugreek-seed one ounce two drams, of Brimstone one ounce and a half, beat all these to a fine powder, and searse them; then take of Sallet-oyle a pint and two ounces, of honey a pint and a half, and of White-wine four pints, then with as much fine white meal as will suffice, make all into a strong stiff paste, and knead and work it well: this paste keep in a cleane cloath, for it will last long, and after your horse hath been hunted, and is at night, or in the morning exceeding thirsty, take a Ball thereof as big as a mans fist, and wash and dissolve it in a gallon or two of cold water, and it will make the water look white like milk; then offer it.

The scouring of the Horse.

it the horse to drink in the dark, lest the colour displease him; if he drink it, then feed him; but if he refuse to drink it, yet care not, but let him fast without drink till he take it, which assuredly he will do in twice or thrice offering; and after once he hath taken it, be then assured he will forsake any other drink for it; of this drink your horse can never take too much, nor too oft if he have exercise, or otherwise it feeds too sore. For all inward infirmities whatsoever it is a present remedy; therefore I would not with any horsemen of vertue at any time to be without it; and being once made, it will last three or four months at least.

Ordering of a
Horse after ex-
ercise.

After your horse hath been exercised with hunting, running train-sets, or otherwise, you shall ever cool him well in the field before you bring him home; but being come to the stable you shall neither wash nor walk, but instantly house him, give him store of fresh litter and rub him therewith, and with dry cloaths, till there be not a wet hair about him, then cloath him with his ordinary cloaths, and wisp him round: then cast another spare cloath over him, which you may abate at your pleasure, and so let him stand till it be time to feed him. And thus you may keep any hunting horse either for match or otherwise, in as good state and strength as any horseman in this Nation, though he exceed you far both in Reputation and Experience,

CHAP. VI.

Of the ordering and dieting of the Running Horse.

IF any husbandman have his mind taken up onely with the delight of Running-horses, which is a noble sport, and though not of so long indurance, yet equal with any before spoken of, he shall for the bettering of his knowledg give to his memory these few Rules following, by which he shall rightly order and diet him.

Of his taking
up.

First, for his taking up from grass (for there for order sake we must first begin) it shall be at the same time of the year, and after the same manner that you took up your hunting horse, and till you have enfeamed him, hardened his flesh, taken away his inward Grease, and brought him to a good perfectness of wind, you shall cloath him, dress him, water him, feed him, exercise him,

him, purge him, and order him after labour, in all points, and in all things as you did your hunting horse.

When he is thus clean of body and wind, you shall then lay on some more cloaths, than you did on your Hunting-horse, to purge his body a little the more, and to make him the more apt to sweat, and evacuate humors as they they shall grow: the ordinary quantity whercof would be a warm narrow woollen cloath about his body on either side his heart, then a fair white sheet, a woollen cloath about it, and a Canvase cloath or two above it, and before his breast a woollen cloath at least two double: he would continually stand upon clean litter, and have his stable very dark, and perfumed with Juniper, when as the strength of his dung shall annoy it.

Of cloathing him.

For his dressing, it shall be in all points done as you did to your hunting horse, only to dress him once a day is sufficient, and that ever in the afternoon: but for rubbing his limbs or body with dry cloaths or wisps, you shall do as often as you come into the Stable, provided that you turn but his cloaths up, but not take them from his body.

Of dressing him.

You shall water your running horse as you watered your hunting horse, and give him the same exercise after it, only you shall not bring him into the Stable of at least an hour and more after he is watered.

Of watering him.

The best food for your running horse, is either good sweet Oats well dried, sunned and beaten, or bread made of two parts wheat, and but one part beans, and boulded and sifted, and knodden, as was before shewed; only if you adde to your better sort of bread the whites of twenty or thirty Eggs, and with the barm, a little Ale also, it will be much the better; for you shall not respect how little water you use at all. The hours you feed in, and the quantity of the food shall be the same, and in the same manner as was mentioned before for the hunting horse, yet with these observations, that if your horse be very lean, sickly, and have a weakly stomach, that then you may as before shewed, give him with his Oats a few spelted beans, or else with his Oats in strong Ale or Beer, or in the Whites of a couple of Eggs.

Of feeding him.

Touching his exercise, it consisteth in two kinds, the one aying, the other coursing: aying, is a moderate and gentle exercise

Of his exercise by aying.

which

which you shall use morning and evening, by riding or leading your horse a foot-pace (but riding is better and less in danger of cold) in the morning after his water up to the Hills, and in the evening after his water by the River-side, by the space of an hour or two together; and before you lead him forth to air, you shall be sure to give him a rere-egg broken into his mouth as soon as his Bridle is put on, for it will increase wind: and this ayiring you shall by no means forbear, but upon his dayes of purging or sweating, or when it much raineth, for then to ayre is unwholsom. Again, if your horse be very fat, you shall air before Sun-rise, and after Sun-set: but if he be lean, then you shall let him have all the strength and comfort of the Sun you can devise; and during this ayiring, you shall be sure that your horse be cloathed very warm, especially before the breast, and on each side the heart, for cold to a running horse is mortal.

Of exercise by
coursing.

You shall course your horse according to his strength and ability of body, that is to say, twice a week thrice, or as oft as you see cause, and you shall course him sometimes in his cloaths to make him sweat and consume his grease, and that must be done moderately and gently: and sometime without his cloath, to increase wind, and that shall be done sharply and swiftly: you shall by keeping your horse fasting the night before, be sure that his body be empty before he do course, to wash his tongue and nostrils with vinegar, or to piss in his mouth ere you take his back, is very wholsome: you shall lead him in your hand well and warm clothed to the course, and there uncloath him, and rub his limbs well, then having coust him, after a little breath taking, cloath him again, and so ride him home, there rub him thoroughly, and let him stand till he be fully cold; which perceived, let his first meat you give him be a handfull or two of the ears of Pollard Wheat; then after, his ordinary food as aforesaid.

Of Sweats.

There is also another exercise for your running horse, which is, sweats in his cloaths, either abroad or in the house. For sweats in his cloaths abroad, they are those which are taken upon the course, and are formerly spoke of, that they must be given by a moderate galloping, no man running, and as soon as your horse hath past over his course, and is in a high sweat, you shall instantly

instantly have him home, and there lay more cloths upon him, and keep him stirring till he have sweat so in the Stable an hour or more, then abate his cloaths by little and little, till he be perfectly cooled and dried; which you must further by rubbing him continually with dry cloths, and by laying dry cloaths on, and taking the wet away: but for Sweats in his cloaths, without any exercise abroad, you shall give them either when the weather is so much unseasonable, that you cannot go forth, or when your horse is so much in danger of lameness, that you dare not strain him; and you shall do it thus. First take a Blanket folded and warmed very hot, and wrap it about his body, then over it lay two or three more, and wisp them round, then over them as many cover-lids, and pin them fast and close; then make the horse stir up and down the Stable till he begin to sweat, then lay on more cloaths, and as the sweat trickleth down his face, so rub it away with dry cloaths till he have sweat sufficiently; then (as before is shewed) abate the cloaths by little and little, and rub him in every part, till he be as dry as at first.

After every course or sweat, you shall scour or purge your horse in the same manner, and with the same medicine that you did him. your Hunting-horse; for it is the best that can by art be invented, being both a Purge and a Restorative, cleansing and comforting all the parts of a horse's body: but if you think it purgeth not enough, then you shall take twenty Raisins of the Sun, the Bones pickt out, and ten Figs slit in the middle, boyl them in a pottle of fair running water, till it come to be thick, then mix it with powder of Lycoras, Anniseeds, and Sugar-candy, till it come to a stiff palle, then make pretty round balls thereof, and roll them up in butter, and give your horse three or four of them the next morning after his sweat or course, and ride him an hour after, and then set him up warm.

After your horse hath been courst or sweat, and is as before said cold and dry, you shall then unbridle him, give him some few Wheat-eare, and then at an hour or two after give him a very sweet mash, then some bread stey, then at his due hour dress him, and give him when you find him thirsty some cold water, with a ball of your Beaven dissolved in it, and so let him stand till you feed him for all night.

H

Course

**General Rules
for a running
Horse.**

Course not your horse fore for at least four or five dayes before you run your match, lest the forenesse of his limbs shate him of his speed.

Except your horse be a very foul feeder muzzle him not above two or three nights before his match, and the night before his bloody courses.

Give your horse as well his gentle courses, as his sharp courses upon the Race he must run, that he may, as well find comfort as displeasure thereon.

In training your horse, observe not the number of the miles, but the labour fit for your horse.

Be sure upon the Match-day that your horse be empty, and that he take his rest untroubled, till you prepare to lead him forth.

Shoe your horse ever a day before you run him, that the pain of the hammers knocks may be out of his feet.

Saddle your horse on the Race-day in the Stable before you lead him forth, and fix both the Pannel and the Girths to his back and sides with Shoo-makers wax, to prevent all dangers.

Lead your horse to his course with all gentleness, and give him leave to smell to other horses dung, that thereby he may be enticed to stake and empty his body as he goes.

When you come to the place where you must start, first rub his limbs well, then loose him, then take his back, and the word gives, start him with all gentleness, and quickness that may be, lest doing any thing rashly you happen to check him in his own wind.

And thus much for the ordering and dieting of the Running horse, and the particularities belonging to the same.

CHAPTER VII.

The ordering of the Travelling Horse.

**General Rules
for a travelling
Horse.**

NOW for our Husbandmans Travelling Horse, which is to carry him in his Journeys, and about his business in the Country, he shall first feed him with the best sweet hay, dry oats, or dry beans, and oats mixt together: in his travel he shall feed him according to his stomach, more or less, and in his rest at a

certain

certain proportion ; as half a Peck at each watering, is utterly sufficient.

If you travel, feed your horse early, that he may take his rest soon.

In travel, by no means wash nor walk your horse, but be sure to rub him clean.

Water him a mile before you come to your Inn, or more, as shall lye in your journey ; or if you fail thereof, forbear it till next morning ; for water hath often done hurt, want of water never did any.

Let your horse neither eat nor drink when he is extream hot, for both are unwholesome.

When the dayes are extream hot, labour your horse morning and evening, and forbear high-noon.

Take not your Saddle off suddenly, but at leisure, and laying on the cloth, lay on the Saddle again till he be cold.

Litter your horse deep, and in the days of his rest let it also lye under him.

Dress your horse twice a day when he rests, and once when he travels.

If the horse be stoned let him go to the soyl, and be purged with grass in May ; a moneths time is long enough, and that grass which grows in Orchards under Trees is best.

Let him blood Spring and Fall, for they are the best times to prevent sicknesses.

In your journeying light at every sleep bill, for it is a great refreshing and comfort to your horse.

Before you sleep, every night in your journey see all your horses feet stopt with Oxe-dung, for it taketh away the heat of travel and surbating.

Many other necessary Rules there are, but so depending upon these already shewed, that who so keepeth them shall not be ignorant of any of the rest ; for they differ more in name than nature.

CHAP. VIII.

How to cure all general inward sicknesses in horses, which trouble the whole body, of Feavers of all sorts, Plagues, Infections, and such like.

Sicknesses in general are of two kinds, one offending the whole body, the other a peculiar member: the first hidden and not visible, the other apparent and known by his outward demonstration. Of the first then, which offend the whole body, are Feavers of all sorts, as the Quotidian, the Tertian, the Quartan, the Continual, the Hittique, the Feavers in Autump, in Summer, or in Winter, the Feaver by Surfeit, Feaver Pestilent, Feaver Accidental, or the general Plague; they are all known by these signs, much trembling, panting, and sweating, a fullen countenance that was wont to be cheerful, hot breath, faintness in labour, decay of stomach, and costiveness in the body; any, or all of which when you perceive, first let the horse blood, and after give him this drink. Take of *Scelandine* roots leaves and all a good handful, as much *Wormwood*, and as much *Rew*, wash them well and then bruise them in a Mortar, which done, boyl them in a quart of Ale well, then strain them, and adde to the liquor half a pound of sweet Butter, then being but luke-warm give it the horse to drink, or half an ounce of *Dispenze*, in a pint of Muskadine.

The Cure.

CHAP. IX.

Of the Head-ach, Frenzy, or Staggers.

THE signs to know these Diseases, which indeed are all of one nature, and work all one effect of mortality, are hanging down of the head, watry eyes, rage, and reeling. And the Cure is to let the horse blood in the neck three mornings together, and every morning to take a great quantity, then after each morning blood-letting, to give the horse this drink. Take a quart of Ale, and boyl it with a big white bread crust, then take it from the fire, and dissolve three or four spoonfuls of honey in it, then luke-warm give it the horse to drink, and cover his temples over with a plaister of Pitch, and keep his head exceeding warm, let his meat be little, and his Stable dark: but to give him the former

The Cure.

quan-

quantity of *Diapente*, either in Muskadine or Honey-water is the best Cure.

CHAP. X.

Of the Sleeping Evil.

The Sleeping Evil or Lethargy in horses proceeds from cold & gross moist humors, which bind up the vital parts, and make them dull and heavy. The signs are continual sleeping, or desire hereunto. The Cure is, to keep him much waking, and twice in one week to give him as much Sweet Soap (in nature of a Pill) as a Ducks egg, and then after give him to drink a little new milk and honey, which is the only cure at the first for this disease. But to be certain, I pray look in my *Master-piece*, and there you shall find the infirmity more largely discoursed of, this being but a general cure of all Cattel, and not particularly handled of horses, as that is.

CHAP. XI.

Of the Falling Evil, Planet-swoon, Night-Mare, or Palsie.

Though these diseases have several faces, and look as though there were much difference between them, yet they are in nature all one, and proceed all from one offence, which is only cold stigmatick humors, ingendred about the Brain, and benumbing the Senses, weakning the members, sometimes causing a horse to fall down, and then it is called the Falling Evil; sometimes weakning but one member only, then it is called Planet-swoon; sometimes oppressing a horses stomach, and making him wear in his sleep, and then it is called the Night-Mare; and sometimes spoiling an especial member by some strange contraction, and then it is called a Palsie. The Cure for any of these infirmities, is to give the Horse this purging Pill: Take of *Tar* three Spoonfulls, of sweet butter the like quantity, beat them well together with the powder of *Lycoras*, *Aniseeds*, and *Sugar*, till it be like paste, then make it into three round balls, and put into each ball two or three cloves of Garlick and so give them unto the horse observing to warm him both before and after, and keep him fasting two or three hours like wise, both before and after.

CHAP.

quantity of Mustard or Honey-water is the

CHAP. XII.

Of the general Cramp, or Convulsion of Sinews.

The Cure.

CRAMPS are taken to be the contraction or drawing together of the sinews of any one member; but Convulsions are when the whole body, from the setting on of the head to the extremest parts are generally contracted and stiffened. The Cure of either is, first to choke and rub the member contracted with Vinegar and common Oyl, and then to wrap it all over with wet Hay, or rotten Litter, or else with wet woollen cloaths, either of which is a present remedy.

CHAP. XIII.

Of any Cough or Cold whatsoever, wet or dry, for any Consumption or putrifaction of the Lungs whatsoever.

The Cure.

A Cold is either by unnatural heat, and too sudden coolings, and these Colds ingender Coughs, and those Coughs putrifaction or rottenness of the Lungs. The Cure therefore for them all in general is to take a handful or two of the white and greenish Moss which grows upon a Oak-pole, or any old Oak-wood, and boyl it in a quart of Milk till it be thick, and being cold turned to a Jelly, then strain it, and give it the horse luke-warm every morning till his Cough end; or else take three quarters of an ounce of the Conserve of *Eucalyptus*, and dissolve it in a pint of Sack, and luke-warm give it the horse fasting; then ride him, after it, and let him up warm, feed as at ordinary times, thus do three mornings together.

CHAP. XIV.

Of the running Glanders, or the murrain of the Chanc.

TAKE of *Amphipentem* two drams, of *Turpentine* made into powder as much, then mix them together with Turpentine till they be like paste, and making thereof little Cakes, dry them before the fire, then take a channel with iron and coals, and laying one or two of the cakes thereon, cover them with a tunnel, and then the smoak rising, put the tunnel into the horses nostrils, and

and let the smoke go up into his head: which do ride the horse till he sweat. Do thus once every morning before he be watered, till the running at his nostrils cease, and the kernels under his chaps wear away.

CHAP. XV.

Of Hide-bound, or consumption of the flesh.

Hide-bound, or consumption of the flesh, proceeds from unreasonable travel, disorderly diet, and many surfs. It is known by a general dislike and leanness over the whole body, and by the sticking of the skin close to the body, in such sort that it will not rise from the body. The Cure is, first to let the horse bleed, and then give him to drink three or four mornings together a quart of new milk, with two spoonfuls of honey, and one ounce of London Treacle: then let his food be either sodden Barley, warm Grains and Salt, or Beans soaked in a Mill, his drink Mashes.

The Cure.

CHAP. XVI.

Of the Breast-pain, or any other sickness proceeding from the heart; as the Anticor, and such like.

These Diseases proceed from too rank feeding, and much fastness: the signs are a faulting in his side, and a disableness to hold down his neck, and a trembling over all his body. The Cure is, to let him bleed, and give him three mornings together two spoonfuls of Dispersive in a quart of Ale or Beer, for it alone putteth away all infection from the heart.

The Cure.

CHAP. XVII.

Of tyred Horses.

If your Horse be tyred either in Journeying or any Hunting-match, your best help for him is to give him warm Urine to drink, and letting him bleed in the mouth to lift him to kick up and swallow the foam. Then if you can come where any Nettles are, rub his mouth and throat with the juice thereof, then gradually rub him until you come to your resting place; where fasten him up very warm, and before you go to bed give him five spoonfuls of Spiritus and drink, and as much Provender as he will.

CHAP.

walk

will eat. The next morning rub his legs with Sheeps-foot oyl, and it will bring fresh nimbleness unto his sinews.

CHAP. XVIII.

Of diseases in the Stomach, as Surfeits, loathing of Meat or Drink, or such like.

IF your Horse with the glut of Provender, or eating raw food, have given such offence to his stomach that he eateth up all he eateth or drinketh, you shall first give him a comfortable drench, as *Diapeme*, or *Treaphamicon* in Ale or Beer; and then keeping him fasting, let him have no food but what he eateth out of your hand, which would be bread well bak'd and old, and after every two or three bits a lock of sweet Hay: and his Drink would be onely new milk till his stomach have gotten strength, and in a bag you shall commonly hang at his nose some brown Bread steep'd in Vinegar, at which he must ever smell; and his stomach will quickly come again to his first strength.

CHAP. XIX.

Of Foundring in the Body.

Foundring in the body is of Surfeits the mortallest and soonest gotten: it proceedeth from intemperate riding a horse when he is fat, and then suddenly suffering him to take cold, or then washing a saddle; there is nothing sooner bringeth this Infirmitie. The signs are sadness of countenance, staring hairs, stiffness of limbs, and loss of belly. And the Cure is only to give him wholsom strong meat, as bread of clean beans, and warm drink, and for two or three mornings together a quart of Ale brewed with Pepper and Cinnamon, and an ounce of *London Treacle*.

The Cure.

CHAP. XX.

Of the Hungry Evil.

The hungry Evil, is an unnatural and over-hasty greediness in the horse to devour his meat faster than he can chew it, and is only known by his greedy swallowing as his maw, and the whole devour it whole. The Cure is to give him some little Milk and whey, and to mix together by another as a mow and to feed him with Provender by a little and little till he be content.

The Cure.

CHAP.

CHAP. XXI.

Of the diseases of the Liver, as Inflammations, Obstructions, and

Consumptions.

THE Liver, which is the vessel of blood, is subject to many diseases, according to the distemperature of the blood, and the signs to know it, is a stinking breath, and a mutual looking towards his body. And the cure is to take *Aristolochia longa*, and boyl it in running water, till the half part be consumed, and let the horse drink continually thereof, and it will cure all evils about the Liver, or any inward conduits of blood.

The Cure.

CHAP. XXII.

Of the diseases of the Gall, and especially of the Yellows.

FROM the overflowing of the Gall, or rather want of the Gall, which is the vessel of Choler, spring many mortal diseases, especially the yellows, which is an extream faint mortal sickness, if it be not prevented betime: the signs are yellowness of the eyes and skin, and chiefly underneath his upper lip next unto his fore-teeth, a sudden and faint falling down by the high-way, or in the Stable, and universal sweat over all the body. The cure is, first to let the horse blood in the neck, in the mouth, and under the eyes: then take two pennyworth of *Saffron*, which being dryed, and made into fine powder, mixt with sweet butter, and in manner of a Pill give it in balls to the horse three mornings together: let his drink be warm, and his hay sprinkled with water. A quart of a strong decoction of *Selladine* helps it also.

The Cure.

CHAP. XXIII.

Of the sickness of the Spleen.

THE Spleen, which is the vessel of Melancholly, when it is over-charged therewith, grows painful, hard and great, in such sort, that sometimes it is visible. The signs to know it, is much groaning, hasty feeding, and a continual looking to his left side only. The cure is *Ligimony*, and boyl a good quantity of it in the water which the horse shall drink; and chopping the

The Cure.

leaves small; mix them very well with sweet *May-Butter*, and give the horse two or three good round balls thereof, in the manner of Pills.

CHAP. XXIV.

Of the Dropfie, or evil habit of the body.

The Cure.

THe Dropfie is that evil habit of the body, which ingendred by surfeits and unreasonable labour, altereth the colours and complexions of horses, and changeth the hairs in such an unnatural sort, that a man shall not know the beast, with which he hath been most familiar. The Cure is, to take a handful or two of *Wormwood*, and boyling it in Ale or Beer, a quart or better, give it the horse to drink luke-warm, morning and evening, and let him only drink his water at noon-time of the day.

CHAP. XXV.

Of the Cholick, Belly-ack, and Belly-bound.

The Cure.

THe Cholick or Belly-ack is a fretting, gnawing, or swelling of the Belly, or great bag, proceeding from windy humors, or from eating of green corn, or pulse, or grains without salt or labour, or bread drownd. And Belly-bound, is when a horse cannot dung. The Cure of the Cholick or Belly-ack is, to take good store of the herb *Dill*, and boyl it in the water you give your horse to drink: but if he cannot dung, then you shall boyl in his water good store of the herb called *Fenugreek*, and it will make him loose without danger of hurting.

CHAP. XXVI.

Of the Laxe or Bloody Flux.

The Cure.

THe Laxe or Bloody flux, is an unnatural looseness in a horses body, which not being stayed, will for want of other excrement, make a horse void blood only. The Cure is, take a handful of the herb *Shepherds-purse*, and boyl it in a quart of strong Ale, and when it is luke-warm, take the seeds of the herb *Woodrose* stamp, and put put it therein, and give it the horse to drink.

CHAP.

CHAP. XXVII.

Of the falling of the Fundament.

THis cometh through milke and weakneſs, and the Cure is, take *Town-Creſſes*, and having dyled them to powder, with your hand put up the Fundament, and then ſrew the powder thereon; after it, lay a little honey thereon, and then ſrew more of the powder, mixt with the powder of *Cummin*, and it helpeth. The Cure.

CHAP. XXVIII.

Of Bots and Worms of all ſorts.

THe Bots and gnawings of Worms is a grievous pain, and the ſigns to know them, is the horſes oft beating his belly, and tumbling and wallowing on the ground, with much deſire to lye on his back. The Cure is, take the leaves chopt of the herb *Seven*, and mix it with honey and butter, and make two or three balls thereof, make the horſe ſwallow them down, and it will help him. The Cure.

CHAP. XXIX.

Of the pain in the Kidneys, pain-riſe, or the Stone.

ALL theſe diſeaſes ſpring from one ground, which is only gravel and hard matter gathered together in the Kidneys, and ſo ſtopping the confluence of Urine. The ſigns are, only that the horſe will often ſtrain to piſſe but cannot. The cure is to take a handful of *Maiden-hair*, and ſteep it all night in a quart of ſtrong Ale, and give it the horſe to drink every morning till he be well: this will break any ſtone whatſoever in a horſe. The Cure.

CHAP. XXX.

Of the Straggle, or the Boil in the Flank.

THIS a ſoreneſs in the horſes ſide, and a hot burning ſmarting when he piſſeth: the ſigns are, he will piſſe oft, yet but a drop or two at a time. The cure is to boyl in the water which he drinketh, good ſere of the herb *Maybly*, or *Hoggs-Fennel*, and is to be put to him. The Cure.

CHAP. XXXI.

Of pissing Blood.

The Cure.

THIS cometh with over-travelling a Horse, or travelling a Horse sore in the winter when he goeth to graze. The cure is, take *Aristolochia longa* a handful, and boyl it in a quart of Ale, and give it the horse to drink luke-warm, and give him also rest.

CHAP. XXXII.

Of the Colt-evill, murthering of the yard, falling of the yard,
shedding the seed.

The Cure.

ALL these evils proceed from much lust in a horse, and the cure is the powder of the Herb *Asit*, and the leaves of *Betony*; stamp them with White-wine to a moist Salve, and anoint the sore therewith, and it will heal all imperfection in the yard: but if the horse shed his seed, then beat Venice Turpentine and Sugar together, and give him every morning a good round ball thereof, untill the flux stay.

CHAP. XXXIII.

Of the particular diseases in Mares, barrenness, consumption, rage of love, casting Foals, hardness to foal, and how to make a Mare cast her Foal.

IF you'll have your Mare barren, let good store of the herb *Agrostus* be boyled in the water she drinketh. If you would have her fruitful, then boyl good store of *Motherwort* in the water which she drinketh. If she loose her belly, which sheweth a consumption of the womb, you shall then give her a quart of Brine to drink, *Mugwort* being boyled therein. If your Mare through pride of keeping grow into extream lust, so that she will neglect her food through the violence of her fleshly appetite, as it is often seen amongst them, you shall house her for two or three dayes, and give her every morning a ball of butter and *Myrrour* castoreo together. If you would have a Mare to cast a Foal, take a handful of *Dittany*, and boyl it in a quart of Ale, and it will deliver her presently. If she cannot Foal, take the herb *Florscemin*, and either dry it or stamp it, and take the powder

der or the juice, and mixe it with strong Ale, and give it the Mare, and it will help her. If your mare from former bruilings or strokes be apt to cast her Foals, as many are, you shall keep her at grafs very warm, and once in a week, give her a good warm mash of drink, this secretly knitteth beyond expectation.

CHAP. XXXIV.

Of drinking Venom, as Horse-leaches, Hens-dung, or such like.

If your Horse have drunk Horse-leaches, Hens-dung, feathers, or such like venomous thing, which you shall know by his panting, swelling, or scouring, you shall take the herb *Saw-Thistle*, and drying it, beat it into powder, and put three spoonfuls thereof into a quart of Ale, and give it the horse to drink.

CHAP. XXXV.

Of Suppositories, Clysters, and Purgations.

If your horse by sickness, strict diet, or too vehement travel grow dry and costive in his body, as it is ordinary, the easiest means in extremity to help him, is to give him a Suppository: the best of which is, to take a candle of four in the pound, and cut off five inches at the bigger end, and thrusting it up a good way with your hand into his fundament, presently clap down his tail, and hold it hard to his Tuel a quarter of an hour, or half an hour, and then give him leave to dung: but if this be not strong enough, then you shall give him a Clyster, and that is, take four handfuls of the herb *Anise*, and boyl it in a pottle of running water till half be consumed, then take the Decoction, and mixe it with a pint of Sallet-oyle, and a pretty quantity of Salt, and with a Clyster-pipe give it at his Tuel. But if this be too weak, then give him a purgation thus. Take twenty Raisins of the Sun without stones, and ten Figs sirt, boyl them in a pottle of running water till it come to a jelly, then mix it with the powder of Lyeoris, Anniseeds, and Sugar-candy, till it be like paste: then make it into round balls, and soul it in sweet butter, and so give it to the horse, to the quantity of three Hen-eggs.

CHAP.

The Cures.

CHAP. XXXVI.

Of Neefing and Frictions.

THere be other two excellent helps for sick horses; as Frictions and Neefings, the first to comfort the outward parts of the body, when the vital powers are astonished: the other to purge the head when it is stop't with phlegm cold, or other thick humors. And of Frictions, the best is Vinegar and Patch-grease melted together, and very hot chafed into the horses body against the hair. And to make a horse neefe, there is nothing better than to take a Bunch of Pellitory of Spain, and binding it unto a stick, thrust it up a horses nostrils, and it will make him neefe without hurt or violence.

CHAP. XXXVII.

Of diseases in the eyes, or watry eyes, blood-shotten eyes, dim eyes, Moon-eyes, stroke in the eye, wart in the eye, inflammation in the eye, Pearl, Pin, Web, or Hum.

Unto the eye belongeth many diseases, all which have their particular signs in their names, and as touching that which is watry, blood-shotten, dim, moon, stricken, or inflamed, they have all one cure. The cure is, take Wormwood, and beat it in a Mortar with the gall of a Bull, strain it, and anoint the horses eyes therewith, and it is an approved remedy. But for the Wart, Pearl, or Pin, or Web, which are evils grown in, and upon the eye to take them off, take the juice of the herb Betun, and wash his eyes therewith, and it will wear the spots away. For the Claw every Smith can cut it out.

CHAP. XXXVIII.

Of the Imposthums in the ear, Pole-evil, Fistula, swelling after blood-letting, any gall'd back, Canker in the Withers, Sifta, Went, Navel-gall, or any hollow Ulcer.

THese Diseases are so apparent and common, that they need no further description but their names, and the most certain cure is to take clay hit a Mud-brillows, with without Lime, the flraws and all, and boyling in in strong vinegar, and apply it plaister-

The Cure.

The Cure.

wile

wife to the fore, and it will of its own nature search to the bottom and heal it; provided, that if you see any dead or proud flesh arise, that then you either eat or cut it away.

CHAP. XXXIX.

Of the Vives.

FOR the *Vives*, which is an inflammation of the kernels between the chap and the neck of the horse; take Pepper one Pennyworth, of *Swines-grease* one spoonful, the juice of a handful of Rew, Vinegar two spoonfuls, mix them together, and then put it equally into both the horses ears, and then tye them up with two flat laces, then shake the ears, that the medicine may go down, which done, let the horse blood in the neck, and in the temple-veins, and it is a certain cure.

CHAP. XL.

Of the Strangle, or any Boyl, Bitch, or other Imposthume whatsoever.

ALL these diseases are of one nature, being only hard Byks or imposthumes gathered together by evil humours, either between the chaps, or elsewhere on the body. The cure is, take *Southernwood*, and dry it to powder, and with Barly-meal and the yelk of an Egg make it into a Salve, and lay it to the Imposthume, and it will ripen it, break it, and heal it. The Cure.

CHAP. XLI.

Of the Canker in the Nose, or any other part of the body.

TO heal any Canker in what part soever it be, take the juice of *Plantane*, as much *Vinegar*, and the same weight of the powder of *Alom*, and with it anoint the sore twice or thrice a day, and it will kill it and cure it.

CHAP. XLII.

Of stanching of Blood, whether it be at the Nose, or proceed from any wound.

IF your horse bleed violently at the nose, and it will not be staid, then you shall take *Betony*, and stamp it in a Mortar with Bay-salt; or other white Salt, and stop it into the horse's nose, or apply.

ply it to the wound, and it will stanch it, but if you be suddenly taken; as riding by the high-way, or otherwise, and cannot get this herb, you shall take any woollen cloath, or any Felt-hat, and with a Knife scrape a fine Lint from it, and apply it to the bleeding place, and it will stanch it presently.

CHAP. XLIIH.

Of the diseases in the mouth, as bloody Rists, Ligs, Lampas, Camery, Inflammation, Tongue-hurt, or the Barbs.

IF you find any infirmity in your horses mouth, as the bloody rists, which are chaps or rists in the palate of the horses mouth; the ligs, which are little pustules or bladders within the horses lips: the Lampas, which is an excretion of flesh above the teeth: the Camery, which is little warts in the roof of the mouth: Inflammations, which are Blisters: Barbs, which are two little paps under the tongue, or any hurt on the tongue by bit or otherwise, you shall take the leaves of Wormwood, and the leaves of *Shirivitt*, and beat them in a Mortar with a little honey, and with it anoint the sores, and it will heal them. As for the Lampas, they must be burnt away, which the ignorantest Smith can easily do.

The Cure.

CHAP. XLIV.

Of pain in the Teeth, or loose Teeth.

FOr any pain in the Teeth, take Betony and seeth it in Ale or Vinegar till a half part be consumed, and wash all the gums therewith: but if they be loose, then only rub them with the leaves of *Elicampane*, or *Horse-chelm* after they have been let blood, and it will fasten them.

CHAP. XLV.

Of the Crick in the Neck.

FOr the Crick in the Neck, you shall first chase it with the Friction before specified, and then anoint and bath it with Sops and Vinegar boyled together.

CHAP.

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CHAP. XLVI.

*Of the falling in the Crest, in anginess of the Maing, on waye
to gaine good sheding of the hair and swig olis has, mid*

All these diseases proceed from poverty, chills, greyn, and
ridings; and the best cure of the falling of the Crest, is blood-
letting, and proud keeping, with store of meat; for strength and
fatnesse, and with this up the Crest, but if the mane be strong, you
shall anoint it with butter, and Brimstone, and if the hair fall
away, then take Southernwood and burn it to ashes, then take
those ashes, and mixing them with common oyl, anoint the place
where with, and it will bring hair presently in, but if the mane
fall, then take the mane, and wash it in the powder, which in the powder,

CHAP. XLVII.

Of pain in the Withers,

Al Horses withers are subject to many griefs, and swelling
which proceed from cold humors, sometimes from a wound
done there, or at any time you see any swelling about them,
you shall take the herb Hearts-tongue, and boyl it with the oyl
of Roses, and very hot apply it to the sore, and it will assuage
it, or else break it and heal it.

CHAP. XLVIII.

Of the greyn of the Back, or weakness in the Back,

These two infirmities are dangerous, and may be cured, but
never absolutely cured; therefore where you find them, take
Colewort and boyl them in oyl, and mixing them with a little
Bean meal charge the Back, and it will strengthen it.

CHAP. XLIX.

Of the greyn of the Back, or weakness in the Back,

Or any of these diseases, take fresh grease, & yellow Armet,
mix them together, and where the Manginess, or itch is,
there rub it hard in, the sore being made raw: But if it be for
Pity, then with a knife cut all the knots, both hard and soft, and
then rub in the Medicine: when done, rye up the Horse to a fire

may not come to bite himself, and then after he hath stood two or three hours, take old piss and salt boyl'd together, provided alwayes that you first let him blood, and take good store from him, and also give him every morning a strong scouring or a strong purge, both which are shewed before.

CHAP. L.

*Of any halting which cometh by strain, or stroke either before or behind from the shoulders or hips.
down to the hoof.*

There be many infirmities which make a horse halt, as pinching the shoulder, wrench in the shoulder, wrench in the necker joynt, splatting the shoulder, shoulder pight, strains in the joynts, and such like, all which since they happen by one accident, as namely, by the violence of some slip or strain, they may be cured by one Medicing, and it is thus: After you have found where the grief is, as you may do by griping and pinching every severall member, then where he most complaineth, there is his most grief. You shall take (if the strain be new) Vinegar, Bolusmenick, the whites of Eggs and Bean-flower, and having beaten them to a perfect salve, lay them very hot to the sore place, and it will cure it; but if the strain be old, then take Vinegar and Butter, and melting them together with Wheat bran, make it into a pultis, and lay it to the sore as hot as may be, and it will without doubt take away the grief.

CHAP. LI.

Of Foundring in the Feet.

OF foundring there be two sorts, a dry and a wet: the dry foundring is incurable; the wet is thus to be helped: First, pare all the soles of his feet so thin, that you may see the quick, then let him blood at every toe, and let them bleed well, then stop the vein with Tallow and Rosen, and having tacked hollow sponges on his feet, stop them with Bran, Tarre and Tallow, as boyling hot as may be, and renew it once in two days, for a week together, then exercise him much, and his feet will come to their use and mien.

CHAP.

CHAP. LII.

*Of the Splent, Curb, Bone-spaven, or any knobby or bony
excreffion or Ring-bone.*

A Splent is a bony excreffion under the Kneec or the fore-legg, the Curb is the like behind the hinder hough, the Spaven is the like on the inside of the hinder hough, and the Ring-bone is the like on the cronet of the hoof. And the cure is, first upon the top of the excreffion, make a slit with your Knife the length of a Barly-corn, or a little more, and then with a fine corner raise the skin from the bone, and having made it hollow, the compasse of the excreffion, and no more; take a little flint, and dip it into the Oyl of *Origannum*, and thrust it into the hole and cover the knob, and so let it abide till you see it rot, and that nature casteth out both the medicine & the core. As for the Ring-bone you shall need to scirrine and anoint it with the oyl only.

The Cure.

CHAP. LIII.

*Of the Malander, Selander, Pain-soratches, Meller, Muller,
Crown-scabs, and such like.*

FOr any of these Sorances, you shall take Verdigrease and soft grease, and grinding them together to an Oyatment, put it in a Box b. it self; then take Wax, hogs-grease, and Turpentine, of each a like, and being melted together, put a salve into another Box: then when you come to dress the sore; after you have taken off the scab and made it raw, you shall anoint it with your green salve of *Verdigrease* and *soft grease* only for two or three dayes; it is a sharp salve, and will knit the cankerous humor: then when you see the sore look fair, you shall take two parts of the yellow salve, and one part of the green salve, and mixing them together, anoint the sore there with till it be whole, making it stronger or weaker as you shall find occasion.

CHAP. LIV.

*Of an upper Attaint, or nether Attaint, or any hurt by
over-reaching.*

These attaints or strokes or cuts by over-reaching either on the back, or on the fore-legg, on the heels or nether joynts

and may be safely healed by the same former medicine and mean which healeth the Malander or Selander in the former Chapter only for your over-reaches you shall before you apply your salve lay the sore plain and open, without hollownes, and wash it with beer and salt, or vinegar and salt.

The Cure.

Of the infirmities of hoofs, as false quarters, loose hoofs, casting hoofs, both round, both running, both brittle, both burnt, both festered, both hollow, both full of sores, or generally to preserve the hoofs from all diseases, the hoof is subject to many miseries, is first to false quarters, which cometh by pricking, and must be helped by good bleeding, where the shoe must bear on every part of the foot but upon the false quarters only: If the hoof be loose, annoint it with pitch of Burgundy, and it will knit it: if it be cleaved off, then pitch of Burgundy and tallow molten together, will bring a new; if it be bound or strained, it must be very well opened at the heels, the foal kept moist, and the coronet annointed with the fat of Bacon and Tar. If the fruit of the feet run with stinking matter, it must be stopp'd with Soot, Turpentine, and Bolus Armenian mixt together: if it be brittle or broken, then annoint it with Pitch and Linseed Oyle, annointed as a soft salve, if it be full then stop it with Soot, and the ashes of a burnt Felt mixt together; if the hoofs be hard, lay hot burning Gladders upon them, and then stop them with Tallow and Tallow, and generally for the preserving of all good hoofs, annoint them daily with the inward or rind of fat Bacon.

CHAP. XVI.

Of the Swellings, or houghs, or any other unnatural swelling, from what cause soever it proceedeth.

The Cure.

These two sorcences, or pustules, or soft round swellings, the first on the inside of the hunder hough, and the other on the very huckle on the hough behind, they are soft and very sore; and the Cures, first to take up the vein above, and let it bleed only from below, then having knit it fast with two three makers ends

on both sides the slit, cut the vein in two pieces: then take Linseed and bruise it in a Mortar, and mixe it with Cow-dung and heat it in a frying-pan, and so apply it to the swelling only, and if it break and run, then heal it with a plaister of pitch, and the horse shall never be troubled with Spaven more: but if the swelling come by strain or bruise, then take pitch-grease, and rubbing it on the sore, therewith holding a hot Iron heat it till it sink in the grease, then fold a linnen cloath about it, and it will affuage all swellings whatsoever.

CHAP. LXV

These are little blebs, or soft swellings on each side the Fetlock, procured by much travel on hard and stony wayes. The Cure is to prick them, and to wash the Jelly, and then rub on the sore with a plaister of pitch.

The Cure.

CHAP. LXVII

Of Enterfaring or Shash-gall, or any gallings.

Enterfaring is hewing one legge on another, and striking off the skin, or proceeding from weakness or straining of the horse's back, and Shash-gall is any gall underneath the fetlock. That enters, and pains them with Turpentine and Verdigrise being together, or Turpentine alone, if it rankle not too much.

The Cure.

CHAP. LXVIII

Hurts on the Cronet, or Quarter-bone, or Matlong.

The Quitter-bone is a hollow ulcer on the top of the cronet, and the Matlong, and the Cure is, First, to scrape it with a red-hot iron, till you have eaten out the core, and made the wound very deep, then you shall heal it up with the same ointment that you heal the Scratches.

The Cure.

CHAP.

CHAP. LX.

*Of Wounds in the foot, as graveling, pricking, figgs,
retails or chafing.*

IF your horse have any wound in his foot, by what mischance
soever, you shall first search it, and see that it be clear of any
nail, point, or other splint to annoy it, then wash it very well
with white Wine and Salt, and after taint it with the Oynment
called *Aegyptiacum*, and then lay hot upon the taint with *Flax-
burds*, *Turpentine*, *Oyl* and *Wax* mingled together, and anoint all
the top of the hoof and crevice with *Sale-ormenick* and *Vinegar* :
do this once a day untill the sore be whole.

CHAP. LXI.

To draw out a Sub, or Thorn.

TAKE the herb *Dittany*, and bruise it in a Mortar with *Black
Soap*, and lay it to the sore, and it will draw out the splent,
iron, thorn, or sub.

CHAP. LXII.

Of the Aubry, or Tetter.

THE Aubry is a bloody Wart on any part of the Horses be-
dy and the Tetter is a Cancerous Ulcer like it: The cure
of both is with a hot iron to scar the one plain to the body,
and to scarrifie the other; then take the jayco of *Playsane*, and
mixe it with *Vinegar*, *Honey*, and the powder of *Allom*, and with
it anoint the sore till it be whole.

CHAP. LXIII.

Of the Curls or Stickinghoof.

THIS is an unnatural bending of the sinews which imper-
fection, a horse bringeth into the world with him; and
therefore it is certain it is incurable and not painful; but
only an eye-sore, yet the best way to keep it from worse labour
pricking, is to bathe his limbs in the decoction of *Coleworts*.

CHAP. LXIV.

Of Spurgeling, or frezing the skin, and hair.

For this there is nothing better than pitch and salt, with which wash the sore daily.

CHAP. LXV.

Of healing any old Sore or Wound.

Rash Butter, and the herb *Lincol*, chop and beaten together to a saive will heal any wound at any old sore.

CHAP. LXVI.

Of Sinews being cut.

If the Horses sinews be cut, take the leaves of wild *Nep* or *Wopshier*, and heating them in a mortar with *May* butter, apply it to the sore, and it will knit the sinews.

CHAP. LXVII.

Of eating away any dead flesh.

Take *Stamburs*, and lay it in a red dock leaf, and roast it in the hot Cinders, and lay it to the sore, and it will eat away any dead flesh. So will *Verdigrease*, *Burnt Allum*, or *Lime*.

CHAP. LXVIII.

Of Knots in the Joints.

Patch-grease applyed as before shewed for swellings, will take away any hard Knots in the flesh, or upon the sinews.

CHAP. LXIX.

Of venemous Wounds, as biting with a mad Dog, stings of Bees, Serpents, or such like.

For any of these mortal or venemous Wounds, take *Torron*, *Calomel*, and the grains of *Whess*, and beat them in a mortar with water of *Santaron*, and make it into a saive, and lay it to the sore, and it will knit it safely.

CHAP. LXX.

Of Lice or Mites.

This distillate of *Wormine* is used in a Horse through natural dislike and poverty: The Cure is take the juice of *Bees* and *Stamfours* beaten together, and with it smother the Horse every day, and it will destroy them.

CHAP.

CHAP. LXIX.

Take the juyce of Pellitory of Spain, and mix it with milk
anoint the Horses Belly therewith, and no Flies will trou-
ble him.

CHAP. LXX.

After you have placed the Bones in their true places, take the
Ferosmand, and beat it in a mortar with the Oyl of Swal-
low, and anoint the members where they are set with it.

CHAP. LXXI.

After you have placed the Bones in their true places, take the
Ferosmand, and beat it in a mortar with the Oyl of Swal-
low, and anoint the members where they are set with it.

CHAP. LXXII.

Of drying up Sores when they be almost whole.
A Horse burnt, or scalded, or the albes of an old shoe sole
burnt, or other soles burnt, any of these simply by the
selves will dry up and loe, though never so moist.

CHAP. LXXIII.

A most famous Receipt to make a Horse that is lean, and full of
ill humours, and full of sores, and full of sores, and full of sores.

Take of Wheat meal and round, and feeds two ounces, Cum-
ber seeds one ounce and two drams, Mustard one ounce and
half, Saffron one ounce, Honey one pound and a half, White
Wine one pint, and a quart of Ale, and a quart of Beer, and
bring them all to a boyle, and then kneaded
together, and so made into a paste, and then every
watering consume one of these balls into his cold water which
he drinketh for morning, and evening for fifteen dayes together;
and if at the first he be dainty to drink the water, yet care not, but
let him see till he drink it, and after he begins to take it, he will
drink it with great greediness.

CHAP. LXXIV.

CHAP. LXXV.

How to make a white Star.

Slit the Horses Fore-head the length of your Star, and then raise the Skin up with a croket, and put in a plate of Lead as big as the Star, and let it remain so two or three days together: and then let it out and press down the Skin with your hand, that Hair will fall away, and white will come in the place: or to scald his Face or Skin with a sower Apple roasted, will bring white Hair: But to make a black Star, or a red Star in a Horses Fore-head, I refer it for you to look and approve of my Master-Piece, which belongeth only to that, for to be exactly discoursed of, that being only a general cure of all Cattell.

The end of the Horse.

The general Cure and Ordering of the Bull, Cow,
Calf or Oxe.

CHAP. I.

*Of the Bull, Cow, Calf or Oxe, their shape and breed, use,
choice, and preservation.*

FOr as much, as the Male of all Creatures are the principal in the breed and generation of things; and that the Fruit which issueth from their Seed participateth most with their outward shapes, and inward qualities, I think fittest in this place, where I intend to treat of Horned Cattell and Near, to speak first of the choice of a fair Bull, being the breeders principall instrument of pro-
fit. You shall understand then, that of our English Cat-
tel, (for I will not speak of those in Italy, and other For-
rain Countries, as other Authors do, and forget mine
own) the best are bred in *Yorkshire, Derbyshire, Lancashire,
Staffordshire, Leicestershire, Gloucestershire, and Somersetshire*
those

shire, those that were bred in *York-shire*, *Darby-shire*, *Lanca-shire* and *Stafford-shire*, are generally all black of colour, and they whose blackness is purest, and their Hairs like velvet, are esteemed best; they have exceeding large horns, and very white with black tips; they are of stately shape, big, round, and well huddled together in every member, short joynted and most comely to the eye, so that they are esteemed excellent in the Market: those in *Lincoln-shire* are for the most part Fide, with more white then the other colours, their horns little and crooked, of bodies exceeding tall, long and large, lean and thin thighed, strong hoked, not apt to surbait, and are indeed fittest to labour and draught. Those in *Somerset-shire* and *Glocester-shire*, are generally of a blood-red colour, in all shapes like unto those

Of not mixing in *Lincoln-shire*, and fittest for their uses. Now to mix a race of these and the black ones together is not good, for their shapes, and colours are so contrary, that their issues are very uncomely: therefore I would wish all men to make their breeds, either simply from one and the same kind, or else to mix *Yorkshire* with *Stafford-shire*, with *Lancashire* or *Darby-shire*, with one of the black races, and so likewise *Lincoln-shire* with *Somerset-shire*, or *Somerset-shire*, with *Glocester-shire*.

The shape of the Bull.

Now for the shapes of your Bull: he would be of a sharp and quick countenance, his horns the larger the better, his neck fleshy, his belly long and large, his fore-head broad and curled, his eyes black and large, his ears rough within, and hair like Velvet, his Muzzel large and broad at the upper Lip, but narrow and small at the neather, his Nostrils crooked within, yet wide and open, his dew-lap extending from his neather Lip down to his fore-booths, large side, thin and hairy, his brest rough and big, his Shoulders large, broad and deep, his ribs broad and wide, his back straight and flat, even to the setting on of his tayle, which would stand high, his huddle bones round and fair, appearing, making his buttocks square, his thighs round, his Legs strait and short joynted, his Knees round and big, his hooves or claws long and hallow, his tayl long and bush-haired, his Pisse round and also well haired. These Bulls as they are for breed: so they are excellently good for the draught, only they naturally draw better single, like horses, then in the yoke, like Oxen: the reason as I suppose being, because they can hardly be matcht in an equal manner.

The use of Bull.

Now

Now for the Cow, you shall chuse her of the same Country with your Bull, and as near as may be of one colour, only her bag or udder would ever be white, with four teats and no more, her belly would be round and large, her forehead broad and smooth, and all other parts such as are before shewed in the male kind.

The use of the Cow is two-fold, either for the Dairy or for breed: the Red Cow giveth the best milk, and the black Cow bringeth forth the goodliest Calf. The young Cow is the best for breed, yet the indifferent old are not to be refused. That Cow which giveth milk longest is best for both purposes, for she which giveth milk not long, but becomes dry, loseth half her profit, and is less fit for teeming: for commonly they are subject to feed, and that straineth the Womb or Matrix.

Now for calves: there are two wayes of breeding them, the one to let them run with their Dams all the year, which is best and maketh the goodliest beast: the other to take them from their Dams, after their first sucking, and so bring them up upon the finger, with flotten milk, the cold only being taken away and no more, for to give a young Calf hot milk, is present death, or very dangerous. If your Calf be calved in five dayes after the change: which is called the *Prime*, do not sear it, for most assuredly it will have the Sturdy, therefore preserve it only for the Butcher: also when you preserve those male Calves, which shall be Bulls, then geld the rest for Oxen, and the younger they are geld the better: the best time for rearing of Calves is from *Michaelmas* till *Candlemas*. A Calf would be nourished with milk twelve weeks, only a fortnight before you wean it from milk, let the milk be mixt with water. After your Calf hath drunk one moneth; you shall take the finest, sweetest and softest hay you can get, and putting little wisps into cloven sticks, place them so as the Calf may come to them and learn to eat Hay. After our Ladies day, when the weather is fair, you may turn your Calves to grass, but by no means let it be rank, but short and sweet, so that he may get it with some labour.

Now of the Oxe: you shall understand that the larger are the best and most profitable, both for draught or feeding, for he is the strongest to indure labour, and best able to containe both flesh and his use.

and tallow. Now for his shape it differeth nothing from that of the Bull, only his Face would be smooth, and his Belly deeper. That Oxe is fittest for the yoke which is of gentle nature, and most familiar with the Man. In matching your Oxe for the yoke, let them be near as may be, of one height, Spirit and strength, for the stronger will ever wrong the weaker, and the duller will Injure him that is of freer Spirit, except the driver be carefull to keep the dull Oxe to his labour; Oxen for the yoke would by no means be put beyond their ordinary pace: for violence in travel heats them, heat breeds surfeits, and surfeits those diseases which makes them unapt to feed or for any other use of goodness. Your Oxe for the yoke will labour well with Barley-straw or Pease-straw, and for blend fodder, which is Hay and Straw mixed together, he will desire no better feeding.

Of his Food
for labour.

Oxen to feed
for the But-
cher.

Now for your Oxe to feed, hee would as much as might be, be ever lusty and young of years; or if old, yet healthful and bruised, which you shall know by a good taile, and a good Pyzel, for if the Hair of one or both be lost, then he is a waster, and he will be long in feeding. If you do see the Oxe doth lick himself all over, it is a good sign that he is market-able and well fed, for it shews soundness, and that the Beast taketh a joy in himself: yet whilst he doth so lick himself he feedeth not, for his own pride hindereth him, and therefore the Husbandman will lay the Oxes own dung upon his hide, which will make him leave licking and fall to his Food. Now if you go to chuse a fat Beast you shall handle his hindmost Rib, and if it be soft and loose like down, then it shews the Oxe is outwardly well fed; so doth soft huckle-bones, and a big natch round and knotty: if his Eod be big and full, it shews he is well tallow'd, and so doth the crop behind the Shoulders: if it be a Cow, then handle her Navil, and if that be big, round and soft, surely she is well tallowed. Many other observations there are, but they be so well known, and common in every mans use, that they need no curious demonstration.

Now for the preservation of these Cattel in good and perfect health, it shall be meet that for the young and lusty, & indeed generally for all sorts, except Calves, to let them blood twice in the year, namely the Spring and Fall, the Moon being in any of the lower

To preserve
Cattel in
health.

lower signs, and also to give them to drink of the pickle of *Olives*, mixed with a head of *Garlick* braised therein; and for your *Calves*, be only careful that they go not too soon to grass, and small danger is to be feared: Now notwithstanding all a mans carefulness, Beasts dayly do get infirmities; and often fall into mortal extremities: peruse therefore these Chapters following, and you shall find cure for every particular disease.

CHAP. II.

Of the Fever in Cattel.

Cattel are most subject unto a Fever, and it cometh either from surfeit of blood, being raw and mussy, or from flux of cold humors ingendred by cold keeping: the signs are trembling, heavy eyes, a foaming mouth, and much groaning: and the cure is, you shall let him blood, and then give him to drink a quart of Ale, in which is boyled, three or four Roots of *Plantane*, and two spoonfulls of the best *London Treacle*, and let his Hay be sprinkled with Water.

CHAP. III.

Of any inward sickness in Cattel.

For any inward sickness or drooping in Cattel, take a quart of strong Ale, and boyl it with a handful of *Wormwood*, and halfe a handfull of *Rue*; then strain it, and add to it two spoonfulls of the juyce of *Garlick*, and as much of the juyce of *Houfleeke*, and as much *Bonden Treacle*, and give it the Beast to drink, being no more but luke-warm.

CHAP. IV.

Of the Disease in the Head, as the Sturdy or Turning-eail.

This disease of the Sturdy is known by a continual turning about of the Beast in one place, and the cure is to cast the Beast, and having made his feet fast, to sit the upper part of his forehead even with about four inches each way, then turning up the Skin and laying the Skull bare, cut a piece out of the Skull two inches square or more; then look, and next unto the panicle of the Brain, you shall see a bladder lye full of water and blood, which

which you shall very gently take out, and throw away; then aoint the place with warm fresh Butter, turn down the Skins, and with a needle and a little Red silk, litch it close together; then lay on a hot Plaister of Oyl, Turpentine, Wax, and a little Rosin melted together with Flax-hurds, and so folding warm woollen cloath about the head, let the beast rise, and so remain three or four dayes ere you dress it again, and then heal it up like another wound, only observe in this cure, by no means touch the brain, for that is mortal, and then the help is both common, and most easie.

CHAP. V.

Of Diseases in the eyes of Cattel, as the Haw, a Stroak, Inflammation, Weeping, or the Pinne or Webbe.

FOR any generall soreness in the eyes of Cattel, take the water of *Eye-bright*, mixt with iuyce of *Moufleeke*, and wash them therewith, and it will recover them: but if a Haw breed herein then you shall cut it out, which every simple Smith can do. But for a Stroak, Inflammation, Pin or Web, which breeds excrescens upon the eyes, take a new laid Egge, and put out half the white: then fill it up with Salt, and a little Ginger, and roste it extream hard in hot Cinders: which done, beat it to powder finel and all; but before you roast it, wrap it in a wet cloath, and put of this powder into the beafts eye, and it will heal and cure it.

CHAP. VI.

Of diseases in the mouth, as barbs under the tongue, blain on the tongue, teeth-loose, or tongue venommed.

THose Barbs, or paps which grow under the tongues of Cattel, and being inflamed do hinder them from feeding, you shall with a keen pair of sheers cut away close by the flesh, and if they bleed much, (as they will do if they be rank) you shall then with a red hot bodkin sear them, and drop on the top of the seared places a drop or two of Rosin and Butter mixt together, but if they bleed not, then only rub them with Sage Salt, and they will heal. Now for the Blain on the tongue, of some called the Tinblain, it is a blister which groweth at the

roots of the tongue, and cometh through heat of the Stomach and much chafing, & is oft very mortal, for it will rise so suddenly and so big that it will stop the wind of the Beast. The Cure is, to thrust your hand into the mouth of the Beast, and drawing out his tongue, with your nayl to break the blister, and then to wash the sore place with strong brine or Sage, Salt, and Water: if you find more blisters then one, break them all, and wash them, and it is a present cure. Now for loose teeth, you shall let the Beast blood in his gums, and under his taylor, then wash his chaps with Sage and Woodbine leaves, boyld in brine: lastly, if the tongue be venomd, which you shall know by the unnatural swelling thereof, you shall take Plantane, and boyling it with Vinegar and Salt, wash the tongue therewith, and it will cure it.

The Cure.

CHAP. VII.

Of diseases in the Neck, as being galled, bruised, swollen, out of joint, or having the Clow.

IF any Oxes neck be galled, bruised, or swollen with the yoke, take the leaves of round *Ascalachia*, and beating them in a Mortar with Tallow or fresh Grease anoint the sore place therewith, and it will not only heal it, but any strain in the Neck, even if the bone be a little disordered. Now for the *Clow* or *Glowse* which causeth a Beast to pull and loose the hair from his Neck, and is bred by drawing in wet and rainy weather, you shall take the ashes of an old burnt shoe, and strew it upon the Neck, and then rub it over with Tallow and Turpentine mixt together.

CHAP. VIII.

Of the Pestilence, Gargil or Murrain in Beasts.

THIS Pestilence or Murrain amongst Beasts is bred by divers occasions, as from rankness of blood, or feeding, from corruption of the air, intemperateness of the weather, inundation of floods, or the infection of other Cattle, much might be said of the violence and mortality thereof, which hath utterly uprooted the whole Countrey. But to get to cure, you shall give to all your Cattle, as well the sound as the sick, this Medicine which never faileth to preserve as many as have taken it: Take of old Urine a quart, and mix it with a handful of Hens dung dissolved therein, and let your Beast drink it.

The Cure.

CHAP.

CHAP. IX.

Of the mistaking or leanness of Beasts.

IF your Beast fall into any unnaturall mist-like or leanness, which you shall know by the discolouring of his Hair; you shall then cause him first to be set blood, and after take sweet Butter and beat it in a Mortar, with a little Mirrh, and the filling of Ivory, and being kept falling, make him swallow down two or three Balls thereof; and if it be in the Winter, feed him with sweet Hay; if in the Summer, put him to grass.

CHAP. X.

Of the distaste in the Guts, as Flux, Costiveness, Cholick, and such like.

IF your Beast be troubled with any sore laxe or bloody-Flux, you shall take a handful of the seeds of Wood-rose, and being dried and beaten to powder, brew it with a quart of strong Ale and give it the Beast to drink. But if he be too dry or costive in his body, then you shall take a handful of Fennugreek, and boyl it in a quart of Ale, and give him to drink; but for any cholick or belly-ache or gnawing of the Guts, boyl in the water which he drinketh good store of Oyl, and it will help him.

CHAP. XI.

Of pissing of Blood.

IF your Beast piss his blood, which cometh either of over-labouring or of hard and fever feeding, you shall take Shepherds-purse, and boyl it in a quart of red Wine and then strain it, and put to it a little Cinnamon, and so give it the Beast to drink.

CHAP. XII.

Of dropping of the Head.

IF your Beast drop his head, which is a sign of cold in the Head, you shall take Quercus and Brimstone and mixing them together, and beat them to powder, and mix with them oil of Turpentine, and thrust them up into the nostrils of the Beast, and use this to do every morning till they leave dropping.

CHAP. XIII.

Of any swelling in a Beast whatsoever.

IF your Beast have any outward swelling, Bath it with Oyl and Vinegar exceeding hot, and it will assuage it: but if the swelling be inward, then boyl round *Aristolochia* in his water.

CHAP. XIV.

Of the Worm in the Tayl.

THERE is a Worm which will breed in the tayl of a Beast, and doth not only keep him from feeding, but also eateth away the hair of the tayl and distiguereh the Beast. The cure is, to wash the tayl in strong Lye made of Urine and Ash-wood-ashes, and that will kill the Worm, and also heal and dry up the sore.

CHAP. XV.

Of any Cough or shortness of breath in Cattel.

IF your Beast be troubled with the Cough or shortness of breath, you shall give him to drink divers morning together a spoonfull or two of Tarr, dissolved in a quart of new milk, and a Head of Garlick clean pill'd and bruised.

CHAP. XVI.

Of any Imposthume, Bile or Botch in a Beast.

IF your Beast be troubled with any Imposthume, Bile or Botch, you shall take Lilly-roots and boyl them in milk till they be soft, so that you may make them like pap: then being very hot, clap them to the sore, and then when it comes to be soft, open it with a hot iron, and let out the filth, then heal it up with Tarr, Turpentine and Oyl mixt together.

CHAP. XVII.

Of diseases in the Spleen, or weakness, stiffness or soreness.

IF you find by the unaimable going of your Beast, that his Spleen is weak, shrink or tender, take Mallow and Chick-weed and boyl them in the Dregs of Ale or in Vinegar, and being

very hot, lay it to the offended member, and it will comfort the sinews.

CHAP. XVIII.

Of the general Scab, particular Scab, Itch or Scurf in Cattel.

IF your Beast be troubled with some few Scabs here and there on his body, you shall rub them off, and anoint the place with black Sope and Tarr, mixt together, and it will heal them. But if the Scab be universal over the body, and the Scabs mixt with a dry Scurf, then you shall first let the Beast bleed, after rub off the Scabs and Scurf till the Skin bleed, then wash it with cold Urine and green Copperas together, and after the bathing is dry, anoint the Body with Bores grease, and Brimstone mingled together.

CHAP. XIX.

Of the hide-bound, or dry skin in Cattel.

THis grief cometh of over-much labour and evil keeping, and above all other Beasts your Lincolnshire Oxen are subject unto it, the signs are a discoloured and hard Skin, with much leanness: the cure is, to let him bleed, and to give him to drink a quart of good strong Ale brewed with Mirrh, and the powder of Bay-berries, or for want of Berries the Bay-tree leaves; and then keep him warm & feed him with Hay that is little snow-burnt and only looketh red, but is not dusty or mouldy, for that will get him an appetite to drink, and drinking will loosen his Skin.

The Cure.

CHAP. XX.

Of the Asenes in the Lungs, especially the Lung-growth.

THe Lungs of a Beast are much subject to sickness, as may appear by much panting, and shortness of breath, the signs being a continual coughing; but that which is before prescribed for the Cough will cure all these, only for a Beast which is Lung-grown, or hath his Lungs grown to his side, which cometh through a cold or a long standing in the summer season, which is known by the Coughing to be a hollow coughing, you shall take a pint of Turpentine, and mix it with a pint of new milk,

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and

and one ounce of brown Sugar Candy, and give it the Beast to drink, this hath been found a present cure, or to give him a ball as big as a mans fist, of Tar and Butter mixt together, is a very certain cure.

CHAP. XXI.

Of biting with a Mad Dog, or any other venomous Beast.

IF your Beast be bitten with a mad Dog, or any other venomous Beast, you shall take *Plaineane*, and beat it in a Morter with *Bole-armonick*, *Sanguis Draconis*, Barley meal, and the whites of Eggs, and plaister-wise lay it to the sore, renewing it once in fourteen hours.

CHAP. XXII.

Of the falling down of the Palate of a Beasts mouth.

ILabour and drought will make the Palate of a Beasts mouth to fall down, which you shall know by a certain hollow changing in his mouth when he would eat, also by his sighing and desire to eat but cannot. The ordinary cure is, you shall cast the Beast, and with your hand thrust it up, then let him bleed in the palate, and anoint it with Honey, and Salt, and then put him to grasse, for he may eat no dry meat.

The Cure.

CHAP. XXIII.

Of any grief or pain in the hoof of a Beast, and of the Foul.

Take *Mugwort*, and beat it in a Mortar with hard Tallow, and apply it to the hoof of the Beast, and it will take away any grief whatsoever. But if he be troubled with that disease, which is called the *Foul*, and comes most commonly by treading in a mans ordure, it breedeth soreness & swelling between the cloyes; you shall for the cure cast the Beast, and with a Flay rope rub him so hard between the same, that you may make him bleed, then anoint the place with *Turpentine*, and *Rutbin-see*, mixt together, and keep him out of the dirt, and he will soon be whole.

The Cure.

CHAP. XXIV.

Of bruising in general, on what part of the body soever they be.

TAKE Brooklime the less, and fry it with Tallow, and so hot lay it to the bruise, and it will either expel it, or else ripen it, break it, and heal it, as hath been often approved.

CHAP. XXV.

Of swallowing down Hens-dung, or any poisonous thing.

IF your Beast have swallowed down Hens-dung, Horse-leeches, or any other poisonous thing, you shall take up into of strong Vinegar, and half so much Oyl: or sweet Butter, and two spoonfulls of London-Toracile; and mixing them together on the fire give it the Beast warm to drink, and it will cure him.

CHAP. XXVI.

Of killing Lice or Ticks.

The Cure.

BEASTS that are bred in Woods under dropping of Trees, or in barren, and unwholesome places are most subject to Lice, Ticks, and other Vermine. The cure whereof is to adoint their body with fresh Grease, Pepper, Stavesaker and Quicksilver, beaten together untill the Quicksilver be slain.

CHAP. XXVII.

Of the Dembol, or general Gargil.

HOWsoever some of our English Writers are opinioned, this Dembol, or general Gargil, is a poisonous and violent swelling, beginning at the neather part of the Demlap; and if it be not prevented, the swelling will ascend upward to the Throat of the Beast, and it is incurable: therefore for the preservation of your Beast, as soon as you see the swelling appear, cast the Beast and slit the swelled place of the Demlap, at least four inches in length; then take a handful or two of Speare-grass, or Knot-grass, and thrusting it into the wound, stitch it up close; then anoint it with Butter and Salt, and so let it rot and wear away of it self: if you perceive that his body be swell'd, which is a sign that the poison is digested inwardly, then it shall be

good

good to give him a quart of *Ale* and *Rue* boyl'd together, and so to chafe him up down well, both before and after.

CHAP. XXVIII.

Of loss of the Cud.

A Beast will many times through carelesnes in chewing, lose his Cud, and then mourn and leave to eat: The certain cure whereof is to take a little sower *Leaven* and *Salt*, and beating it in a mortar with mans *Urine* and *Lome*, make a pretty big ball and force him to swallow it down, and it will recover his Cud.

The Cure.

CHAP. XXIX.

Of killing of all sorts of Worms, either in the Oxe, Cow or Calfe.

There is nothing killeth Worms in the bodies of Cattel sooner then *Savin* chopt small, and beaten with sweet *Butter*, and so given in round balls, to the Beast; nor any thing maketh them void them so soon as sweet *Wort* and a little black *Sope*, mixt together, and given the Beast to drink.

CHAP. XXX.

Of the vomiting of Blood.

This disease cometh of the rankness of blood got in Fruitful Pastures after hard keeping, insomuch that you shall see the blood flow from their mouths. The cure is, first to let the Beast blood, and then give to drink *Bole-armenick* and *Ale* mixt together.

The Cure.

CHAP. XXXI.

Of the Gout in Cattel.

If your Beast be troubled with the Gout, which you shall know by the sudden swelling of his joynts, and falling again, you shall take *Galingall*, and boyl it in the dregs of *Ale* and sweet *Butter*, and Pultis-wise lay it to the offended member.

CHAP. XXXII.

Of Milking of a Beast.

Milking is when a Beast will oft fall, and oft rise, as he is at his labour, and cannot indure to stand any while together it proceeds from some stroke or bruise, either by cudgil or other, blunt weapon: And the cure is, not to raise him suddenly, but to give him *Ale*, and some stone *Pisch* mixt very well together to drink.

CHAP.

CHAP. XXXIII.

Of provoking a Beast to piss.

IF your Beast cannot piss, steep *Smallage*, or the roots of *Radish* in a quart of *Ale* and give it him to drink, and it presently helpeth.

CHAP. XXXIV.

Of over-flowing of the Gall in Beasts.

THe over-flowing of the Gall, is ever known by the yellowness of the Skin, and the eyes of the Beast: And the cure is, to give him a quart of Milk, Saffron and Turmerick mixt together to drink after he hath been let blood, and so do three mornings together.

CHAP. XXXV.

Of a Beast that is goared, either with Stake, or the horn of another Beast.

TAke *Turpentine* and *Oyl*, and heat them on the Coals, and then taint the wound therewith, and it will heal it.

CHAP. XXXVI.

Of a Cow that is misbayed.

THis disease is, when a Cow after her calving cannot cast her cleaning, and therefore to compel her to cast it, you shall take the juyce of *Betony*, *Mugwort* and *Mallows*, of each three Spoonfuls, and mix it with a quart of *Ale*, and give it the Beast to drink, and also give her to eat scorched Barley, and it will force her to avoid her burthen suddenly.

CHAP. XXXVII.

Of drawing out stubs or Thorns.

TAke black Snails and black Sope, and beat them to a salve, and apply them to the sore, and it will draw the grief to be apparent.

CHAP. XXXVIII.

Of purging of Cattle.

THere is nothing doth purge a Beast so naturally, as the green weedy grass which groweth in Orchards under trees, nor any Medicine doth purge them better than *Tarr*, *Butter*, and *Sugar-Candy* mixt together, and given in balls as big as an Hens Egg.

CHAP.

CHAP. XXXIX.

Of being shrew-run or shrew-bitten.

A Shrew Mouſe, which is a Mouſe with ſhort uneven legs, and a long head like a Swine, is venomous, and if it bite a Beaſt, the ſore will ſwell and rankle, and put the Beaſt in danger: but if it only run over a Beaſt; it feebleth his hinder parts, and maketh him unable to go: The cure then for being ſhrew-bitten is the ſame which is formerly ſhewed for the biting of other venomous Beaſts; But if he be ſhrew-run, you ſhall only draw him under, or beat him with a bramble, which groweth at both ends in the Furrows of Corn lands.

CHAP. XL.

Of faintneſs in Labour.

IF your Beaſt in his Labour, and heat of the day chance to faint you ſhall looſe him, and drive him to the running ſtream to drink, and then give him two or three Oſpines full of parch'd Barley to eat, and he will labour freſh again.

CHAP. XLI.

Of breeding Milk in a Cow.

IF your Cow after her Calving cannot let down her Milk; you ſhall give her a quart of ſtrong Poſſet-Ale, mixed with *Anniſeed* and *Ciliander ſeed*, beaten to powder, to drink every morning, and it will not only make her Milk ſpring but alſo increaſe it wonderfully.

CHAP. XLII.

Of Bones out of joint, or bones broken.

IF any Beaſt have a bone broken, or miſplaced, after you have ſet it right, and in his true place, you ſhall wrap a plaifter about it made of *Burgundy-Piſch*, *Tallow* and *Linſeed-oyl*, and then ſpent it, and let it remain unbound 15 days, and it will do much good.

CHAP. XLIII.

Of the Rot in the Beaſts.

IF your Beaſt be ſubject to rottenneſs, which you may know by his ſcannels, milke, and continually ſcowering behind: you ſhall take *Bay-berries*, beaten to powder, *Mirth*, *Ivy-leaves*, *Elder-leaves* and *Feather-ſew*, a good lump of *ſtiff Clay*, and *Bay-ſalt*, mix theſe together in ſtrong Urine, and being warm, give
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the Beast half a pint thereof to drink, and it will knit and preserve them.

CHAP. XLIV.

Of the Pantas.

THe Pantas is a very faint disease, and maketh a Beast to sweat, shake, and pant much. The cure is, to give him Ale and Urine mixt together, a little foot and a little earning to drink two or three mornings before you labour him.

CHAP. XLV.

Of all manner of Wounds in Beasts.

TO cure any Wounds in Beasts, given by edge-tools, or otherwise, where the Skin is broke; take Hogs-grease, Tarr, Turpentine and Wax, of each a like quantity, and a quarter so much Verdigrease, and melt them altogether into one salve, and apply it to the wound, by spreading it upon a Cloth, and it will heal it without any rank or dead flesh.

The end of the Bull, Ox, Cow and Calfe, &c.



Of Sheep.

CHAP. I.

Of Sheep in general, their use, choice, shape, and preservation.

TO enter into any long discourse of praise or profit of sheep, or to shew my reading by relation of the Sheep of other Countries, were frivolous, because I am to write much in a very little Paper, & I speak only to my Countrey-men, the English, who desire to learn & know their own profit. Know them that

that whosoever will stock himself with good Sheep, must look into the nature of the soils in which he liveth: for Sheep according to the earth and air in which they live, do alter their nature and properties, the barren Sheep becoming good in good soiles, and the good Sheep barren in evil soils. If then you desire to have Sheep of a curious fine staple of wooll, from whence you may draw a thread as fine as silk, you shall see such in *Herefordshire*, about *Lempster* side, and other special parts of that County; in that part of *Worcestershire* joyning upon *Shropshire*, and many such like places: yet those sheep are very little of bone, black faced, and bear a very little burthen. The Sheep upon *Cotwal* hills are of better bone, shape, and burthen, but their staple is courser and deeper. The Sheep in that part of *Worcestershire*, which joyneth on *Warwickshire*, and many parts of *Warwickshire*, all *Leicestershire*, *Buckinghamshire*, and part of *Northamptonshire*, and that part of *Nottinghamshire* which is exempt from the Forrest of *Sherwood*, beareth a large boned Sheep of the best shape, and deepest staple, chiefly if they be Pasture-Sheep, yet is their wool courser than that of *Cotwal*, *Lincolnshire*, especially in the salt Marshes have the largest Sheep, but not the best Wool, for their legs and bellies are long and naked, and their staple is courser than any other. The Sheep in *Yorkshire*, and so Northward, are of a reasonable big bone, but of a staple rough and hairy, and the *Welsh* Sheep are of all the worst, for they are both little and of worse staple, and indeed are praised only in the dish, for they are the sweetest Mutton.

If now, knowing the natures and properties of the Sheep of every Country, you go about to stock your ground, be sure to bring your Sheep from a worse soil to a better, and not from a better to a worse. The Lear, which is the earth on which a Sheep lyeth, and giveth him his colour, is much to be respected: the red Lear is held the best; the duskyish, inclining to a little redness, is tolerable; but the white or dirty Lear is stark naught. In the choice therefore of your Sheep, chuse the biggest boned, with the best wooll; the staple being soft, greatie, well curled, and close together, so that a man shall have much ado to part it with his fingers. These Sheep besides the bearing of the best burthen, are alwayes the best Butchers ware, and go soonest away in the Market.

Of the choice
of Sheep.

Of the Lear.

and one ounce of brown Sugar Candy, and give it the Beast to drink, this hath been found a present cure, or to give him a ball as big as a mans fist, of Tar and Butter mixt together, is a very certain cure.

CHAP. XXI.

Of biting with a Mad Dog, or any other venomous Beast.

IF your Beast be bitten with a mad Dog, or any other venomous Beast, you shall take *Plantane*, and beat it in a Mortar with *Sole-armonick*, *Sanguis Draconis*, Barley meal, and the whites of Eggs, and plaister-wife lay it to the sore, renewing it once in fourteen hours.

CHAP. XXII.

Of the falling down of the Palate of a Beasts mouth.

ILabour and drought will make the Palate of a Beasts mouth to fall down, which you shall know by a certain hollow ringing in his mouth when he would eat, also by his sighing and desire to eat but cannot. The ordinary cure is, you shall cast the Beast, and with your hand thrust it up; then let him bleed in the palate, and anoint it with Honey, and Salt; and then put him to grass, for he may eat no dry meat.

The Cure.

CHAP. XXIII.

Of any grief or pain in the hoof of a Beast, and of the Foul.

Take *Mugwort*, and beat it in a Mortar with hard Tallow, and apply it to the hoof of the Beast, and it will take away any grief whatsoever. But if he be troubled with that disease, which is called the *Foul*, and comes most commonly by treading in a mans ordure, it breedeth soreness & swelling between the cloyes: you shall for the cure cast the Beast, and with a Flay rope rub him so hard between the same, that you may make him bleed, then anoint the place with *Turpentine*, and *Rubbin-see*, that together shall keep him sound of the hoof, and he will soon be whole.

The Cure.

CHAP. XXIV.

Of bruising in general, on what part of the body soever they be.

TAKE Brooklime the less, and fry it with Tallow, and so hot lay it to the bruise, and it will either expel it, or else ripen it, break it, and heal it, as hath been often approved.

CHAP. XXV.

Of swallowing down Hens-dung, or any poisonous thing.

IF your Beast have swallowed down Hens-dung, Horse-leeches, or any other poisonous thing, you shall take up into a strong Vinegar, and half so much Oyl: or sweet Butter, and two spoonfulls of London-Treacle; and mixing them together on the fire give it the Beast warm to drink, and it will cure him.

CHAP. XXVI.

Of killing Lice or Ticks.

BEASTS that are bred in Woods under dropping of Trees, or in barren, and unwholesome places are most subject to Lice, Ticks, and other Vermine. The cure whereof is to anoint their body with fresh Grease, Pepper, Stavesaker and Quicksilver, beaten together untill the Quicksilver be slain.

CHAP. XXVII.

Of the Dew-bolt, or general Gargil.

HOWsoever some of our English Writers are opinioned, this Dew-bolt or general Gargil, is a poisonous and violent swelling, beginning at the neather part of the Dewlap; and if it be not prevented, the swelling will ascend upward to the Throat of the Beast, and it is incurable: therefore for the preservation of your Beast, as soon as you see the swelling appear, cast the Beast and slit the swelled place of the Dewlap, at least four inches in length; then take a handful or two of Speare-grass, or Knot-grass, and thrusting it into the wound, stitch it up close; then anoint it with Butter and Salt, and so let it rot and wear away of it self, if you perceive that his body be swell'd, which is a sign that the poison is dispersed inwardly, then it shall be good

good to give him a quart of *Ale* and *Rue* boyl'd together, and so to chafe him up down well, both before and after.

CHAP. XXVIII.

Of loss of the Cud.

A Beast will many times through carelesness in chewing, lose his Cud, and then mourn and leave to eat: The certain cure whereof is to take a little sower *Leaven* and *Salt*, and beating it in a mortar with mans *Urine* and *Lome*, make a pretty big ball and force him to swallow it down, and it will recover his Cud.

The Cure.

CHAP. XXIX.

Of killing of all sorts of Worms, either in the Oxe, Cow or Calf.

THERE is nothing killeth Worms in the bodies of Cattel sooner then *Savin* chopt small, and beaten with sweet *Butter*, and so given in round balls, to the Beast; nor any thing maketh them void them so soon as sweet *Wort* and a little black *Sope*, mixt together, and given the Beast to drink.

CHAP. XXX.

Of the vomiting of Blood.

THIS disease cometh of the rankness of blood got in Fruitful Pastures after hard keeping, insomuch that you shall see the blood flow from their mouths. The cure is, first to let the Beast blood, and then give to drink *Bole-armenick* and *Ale* mixt together.

The Cure.

CHAP. XXXI.

Of the Gout in Cattel.

IF your Beast be troubled with the Gout, which you shall know by the sudden swelling of his joynts, and falling again, you shall take *Galingall*, and boyl it in the dregs of *Ale* and sweet *Butter*, and Pultis-wise lay it to the offended member.

CHAP. XXXII.

Of Milking of a Beast.

MILKING is when a Beast will oft fall, and oft rise, as he is at his labour, and cannot indure to stand any while together it proceeds from some stroke or bruise, either by cudgil or other, blunt weapon: And the cure is, not to raise him suddenly, but to give him *Ale*, and some stone *Pitch* mixt very well together to drink.

CHAP.

CHAP. XXXIII.

Of provoking a Beast to piss.

IF your Beast cannot piss, steep *Smallage*, or the roots of *Radish* in a quart of *Ale* and give it him to drink, and it present'y helpeth.

CHAP. XXXIV.

Of over-flowing of the Gall in Beasts.

THe over-flowing of the Gall, is ever known by the yellow-ness of the Skin, and the eyes of the Beast: And the cure is, to give him a quart of Milk, Saffron and Turmerick mixt together to drink after he hath been let blood, and so do three mornings together.

CHAP. XXXV.

Of a Beast that is goared, either with Stake, or the horn of another Beast.

TAke *Turpentine* and *Oyl*, and heat them on the Coals, and then taint the wound therewith, and it will heal it.

CHAP. XXXVI.

Of a Cow that is withered.

THis disease is, when a Cow after her calving cannot cast her cleaning, and therefore to compel her to cast it, you shall take the juyce of *Betony*, *Mugwort* and *Mallows*, of each three spoonfuls, and mix it with a quart of *Ale*, and give it the Beast to drinke, and also give her to eat scorched Barley, and it will force her to avoid her burthen suddenly.

CHAP. XXXVII.

Of drawing out stubs or Thorns.

TAke black Snails and black Sope, and beat them to a salve, and apply them to the sore, and it will draw the grief to be apparent.

CHAP. XXXVIII.

Of purging of Cattle.

THere is nothing doth purge a Beast so naturally, as the green weedy grass which groweth in Orchards under trees, nor any Medicine doth purge them better than *Tarr*, *Butter*, and *Sugar-Candy* mixt together, and given in balls as big as an Hens Eg-

CHAP.

CHAP. XXXIX.

Of being shrew-run or shrew-bitten.

A Shrew Mouse, which is a Mouse with short uneven legs, and a long head like a Swines, is venomous, and if it bite a Beast, the sore will swell and rankle, and put the Beast in danger: but if it only run over a Beast; it feebleth his hinder parts, and maketh him unable to go: The cure then for being shrew-bitten is the same which is formerly shewed for the biting of other venomous Beasts; But if he be shrew-run, you shall only draw him under, or beat him with a bramble, which groweth at both ends in the Furrows of Corn lands.

CHAP. XL.

Of faintness in Labour.

IF your Beast in his Labour, and heat of the day chance to faint you shall loose him, and drive him to the running stream to drink, and then give him two or three Ospines full of parch'd Barley to eat, and he will labour fresh again.

CHAP. XLI.

Of breeding Milk in a Cow.

IF your Cow after her Calving cannot let down her Milk; you shall give her a quart of strong Posset-Ale, mixed with *Anni-seed* and *Celandine-seed* beaten to powder, to drink every morning, and it will not only make her Milk spring, but also increase it wonderfully.

CHAP. XLII.

Of Bones out of joints, or bones broken.

IF any Beast have a bone broken, or misplaced, after you have set it right, and in his true place, you shall wrap a plaister about it made of *Burgundy-Pitch*, *Tallow* and *Linseed-oyl*, and then splent it, and let it remain unbound 15 days, and it will do much good.

CHAP. XLIII.

Of the Rot in the Beasts.

IF your Beast be subject to rottenness, which you may know by his leanness, milke, and continually scowring behind: you shall take *Bay-berries*, beaten to powder, *Mirth*, *Ivy-leaves*, *Elder-leaves* and *Feather-sew*, a good lump of *clay*, and *Bay-salt*, mix these together in strong Urine, and being warm, give the

the Beast half a pint thereof to drink, and it will knit and preserve them.

CHAP. XLIV.

Of the Pantas.

THe Pantas is a very faint disease, and maketh a Beast to sweat, shake, and pant much. The cure is, to give him Ale and Urine mixt together, a little soot and a little earning to drink two or three mornings before you labour him.

CHAP. XLV.

Of all manner of Wounds in Beasts.

TO cure any Wounds in Beasts, given by edge-tools, or otherwise, where the Skin is broke; take Hogs-grease, Tarr, Turpentine and Wax, of each a like quantity, and a quarter so much Verdigrease, and melt them altogether into one salve, and apply it to the wound, by spreading it upon a Cloth, and it will heal it without any rank or dead flesh.

The end of the Bull, Oxe, Cow and Calfe, &c.



CHAP. XLVI.

Of Sheep.

CHAP. I.

Of Sheep in general, their use, choice, shape, and preservation.

TO enter into any long discourse of praise or profit of Sheep, or to shew my reading, by relation of the Sheep of other Countries, were frivolous; because I am to write much in a very little Paper, & I speak only to my Countrey-men, the English, who desire to learn & know their own profit. Know then that:

that whosoever will stock himself with good Sheep, must look into the nature of the soils in which he liveth: for Sheep according to the earth and air in which they live, do alter their nature and properties, the barren Sheep becoming good in good soiles, and the good Sheep barren in evil soils. If then you desire to have Sheep of a curious fine staple of wooll, from whence you may draw a thread as fine as silk, you shall see such in *Herefordshire*, about *Lempster* side, and other special parts of that County; in that part of *Worcestershire* joyning upon *Shropshire*, and many such like places: yet those sheep are very little of bone, black faced, and bear a very little burthen. The Sheep upon *Cotwal* hills are of better bone, shape, and burthen, but their staple is courser and deeper. The Sheep in that part of *Worcestershire*, which joyneth on *Warwickshire*, and many parts of *Warwickshire*, all *Leicestershire*, *Buckinghamshire*, and part of *Northamptonshire*, and that part of *Nottinghamshire* which is exempt from the Forrest of *Sherwood*, beareth a large boned sheep of the best shape, and deepest staple, chiefly if they be Pasture-Sheep, yet is their wool courser than that of *Cotwal*, *Lincolnshire*, especially in the salt Marshes have the largest Sheep, but not the best Wool, for their legs and bellies are long and naked, and their staple is courser than any other. The Sheep in *Yorkshire*, and so Northward, are of a reasonable big bone, but of a staple rough and hairy, and the *Welsh* Sheep are of all the worst, for they are both little and of worse staple, and indeed are praised only in the dish, for they are the sweetest Mutton.

If now, knowing the natures and properties of the Sheep of every Country, you go about to stock your ground, be sure to bring your Sheep from a worse soil to a better, and not from a better to a worse. The Lear, which is the earth on which a Sheep lyeth, and giveth him his colour, is much to be respected: the red Lear is held the best; the dusky, inclining to a little redness, is tolerable; but the white or dirty Lear is stark naught. In the choice therefore of your Sheep, chuse the biggest boned, with the best wooll; the staple being soft, greasie, well curled, and close together, so that a man shall have much ado to part it with his fingers. These Sheep besides the bearing of the best burthen, are alwayes the best Butchers ware, and go soonest away in the Market.

Of the choice
of Sheep.

Of the Lear.

The Shape of a
Sheep.

ket. Therefore in the choice of sheep for your breed, have a principal respect to your Rams, for they ever mar or make a flock: let them as neer as you can have these properties or shapes. First, large of body in every general part, with a long body, and a large belly, his forehead would be broad, round and well rising, a cheerful large eye, strait short nostrils, and a very small muzzel; by no means any horns, for the dodder sheep is the best breeder, and his issue never dangereth the Dam in yeaning, as the horned sheep do: besides, those sheep which have no horns, are of such strength of head, that they have oft been seen to kill those sheep which have the largest horns, and best wrinkled. A Sheep would have a large upright neck, somewhat bending like the neck of a horse, a very broad back, round buttocks, a thick tail, and short joynted legs, small, clean, and nimble, his wooll would be thick and deep, covering his belly all over, also his face, and even to his nostrils, and downward to his very knees and hinder houghs. And thus according to the shape, propertie, and soil from whence you choose your Rams, choose the rest of your stock also.

When Ewes
should bring
forb.

The best time for your Ewes to bring forth their young ones is, if they be pasture sheep, about the latter end of *April*, and to untill the beginning of *June*; but if they be field-sheep, then from the beginning of *January* till the end of *March*, that their Lambs may be strong and able before *May* day, to follow their Dams over the rough Fallow-lands, and Water-furrows, which weak Lambs are not able to do: and although you year thus early in the Winter, when there is no grass springing, and the sharpness of the weather also be dangerous, yet the husbandman must provide shelter and sweet fodder, and the Shepherd with great vigilance be stirred at all hours, to prevent evils, for the reasons before shewed; and though the Ewe at the first be scant of Milk, yet as the warm weather increaseth, and the grass beginneth to spring, so will her milk spring also.

Ordering
Lambs.

Now for your Lambs: about *Michaelmas* you shall separate the male from the female; and having chosen out the worthiest, which you mean to keep for Rams, put them aside, and then gueld the rest, which every orderly Shepherd can do sufficiently, for there is no danger in guelding young Lambs. The first year a male Lamb is called a Weather-hog, and a female Lamb

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an Ewe-hog : the second year the male is a Weather, and the female a Theafe, and then she may be put to the Ram : but if you let her go over that year also, then she is a double Theafe, and will both her self be the goodlier sheep, and also bring forth the goodlier Lamb ; whence it comes, that the best Sheep-masters, make more account of the double Theafe, than of any other breeder.

You shall observe, never to shear your Lambs till they be full hogs : you shall ever wash three dayes before you shear : the best time of shearing is from *June* to *August*. Ewes are ever good breeders from three years old till their mouths break. If you would have your Ewes bring forth male Lambs, note when the North-wind bloweth, and driving your flock against the wind, let your Rams ride as they go, and this will make the Ewes to conceive male Lambs. So likewise, if you would have female Lambs, put your Rams to the Ewes when the wind bloweth out of the South.

Needful Observations.

Now for the general preservation of Sheep, feed them as much as you can upon high grounds, which are dry and fruitful, the grass sweet, yet so short that it must be got with much labour ; but if you must force per-force feed upon low and moist grounds which are infectious, you shall not bring your Sheep from the Fold, (for I now speak to the honest English husbandman) untill the Sun be risen, and that the beams begin to draw the dew from the earth ; then having let them forth, drive them to their place of Feed, and there with your dog chase them up and down till they be weary, and then let them either feed or take their rest, which they please. This chasing first, beateth away Mill-dews, and all other dews from the earth, as also those webs, kells, and flakes, which lying on the earth, and a Sheep licking them up, do breed rottenness. Also this chasing stirreth up that natural heat in a Sheep, which drinketh up, and wasteth the abundance of moisture ; which else would turn to rottenness. Besides, a Sheep being thus chased and wearied, will fall to his food more deliberately, and not with such greediness, as otherwise he would, and also make choice of that meat which is best for his health. If a Shepherd once in a month, or alwayes when he hath occasion to handle his Sheep, rub their mouths with Bay-salt, it

is an excellent preservation against all manner of sickness, and very comfortable for a Sheep also, for a Sheep will very well live and abate of his flesh, by rubbing his mouth once a day with Bay-salt only. Now forasmuch as notwithstanding these principles, a Sheep falleth into many infirmities, hereafter followeth the several cures of all manner of diseases.

CHAP. II.

The signs to know a sound sheep, and an unsound sheep.

IF a Sheep be sound and perfect; his eye will be bright and cheerful, the White pure without spot, and the strings red, his gums also will be red, his teeth white and even, his skin on his brisket will be red, and so will each side betwixt his body and his shoulder where wool grows not, his skin in general will be loose, his wool fast, his breath long, and his feet not hot: but if he be unsound, then these signs will have contrary faces; his eyes will be heavy, pale, and spotted, his breast and gums white, his teeth yellow and foul, his wool when it is pulled will easily part from his body; and when he is dead open him, and you shall find his belly full of water, his fat yellow, his liver putrified, and his flesh moist and waterish.

CHAP. III.

Of sickness in general, or the Feaver amongst Sheep.

CHange of pasture is a great cure for sick Sheep; yet if you find any more particularly troubled than the rest, take Puliot-Royal, and stamping it, mix the juice with water and vinegar the quantity of half a pint, and give it the Sheep with a horn, luke-warm; and by no means let the Sheep be much chafed. Also in these sicknesses the Shepherd must have a great care to note from whence the disease groweth: if it proceed from cold, then to drive his sheep to shelter; if from heat, then to feed them in shady cool places.

CHAP. IV.

Of the general Scab or Itch in Sheep.

THe general scab or Itch in Sheep, is of all diseases the most common among them, proceeding from rainy and wet weather, which falling upon their skins, if they happen to be chafed or heated after, they presently break forth into the scabs, which you shall know by a white filthy scurf sticking upon their

their skins. And the most usual medicine for the same, which all Shepherds use, is to anoint the place with Tar and Grease mixt together; but if upon the first appearance of the itch you steep *Pulio-Royal* in water, and wash the skin therewith, it will preserve them from running into the scab.

CHAP. V.

Of killing Maggots in Sheep.

IF a Sheep be troubled with Maggots, you shall take *Goose-grease, Tar, and Brimstone*, and mixe them together on the fire, and then anoint the place therewith, and it will kill the Maggots.

CHAP. VI.

Of the Red Water.

THE Red water is a poisonous disease in Sheep, offending the heart, and is indeed as the pestilence amongst other cattel, therefore when you find any of your Sheep infected therewith, you shall first let him blood in the foot between the claws; and also under the tail, and then lay to the sore places *Rew* or *Wormwood* beaten with Bay-salt, and it helpeth.

CHAP. VII.

Of Lung-sick, or any Cough or Cold.

IF your Sheep be troubled with any sickness in his Lungs, which you shall know by his coughing and shortness of breath, you shall take *Fussilago, or Colts-foot* and *Lung-wort*, and stamping them, strain the juice into a little honey and water, and give it the Sheep to drink.

CHAP. VIII.

Of the Worm in the Claw of the Sheep, or any other part.

THIS Worm breedeth commonly before, between the Claws of the foot; but wheresoever it breedeth it is known by the head, which is like a tuft of hair, and will stick forth in a bunch. The cure is to slit the foot, and draw out the worm without breaking it, and then anoint the place with Tar and Tallow mixt together, for Tar simply of it self will draw too much. The Cure.

CHAP. IX.

Of the Wild-fire in Sheep.

THIS disease, which is called the Wild-fire, is a very infectious sickness, and will indanger the whole flock, but howsoever incurable.

incurable it is held, yet it is certain, that if you take *Cheervile*, and stamping it with old *Ale*, make a salve thereof, and annoint the fore therewith, it will kill the fire, and set the Sheep safe: and though some for this disease bury the first infected Sheep alive, with his heels upward, before the Sheep-coat door, yet this medicine hath ever been more effectual.

CHAP. X.

Of the disease of the Gall, as Cholter, Jaundice, and such like.

The Cure.

THese diseases are known by the yellowness of the Sheeps skin: and the cure is, to take *Plantane* and *Lettuce*, and stamping them together, mix their juice with vinegar, and give half a pint to a Sheep to drink.

CHAP. XI.

Of the tough slegm, or stopping in Sheep.

IF your Sheep be stoppt in the head, breast, or weasand, either with tough slegm, or other cold humours, which you shall know by the running of the nostrils; then take the powder of *Pulioi-royal*, and mixing it with clarified hony, dissolve it in warm water, the quantity of half a pint, and give it the Sheep to drink, and it will loosen the slegm.

CHAP. XII.

Of bones broken in Sheep, or bones out of joynt.

IF your Sheep chance to break a leg, or have any other bone misplaced, you shall after you have set it straight and right again, first bath it with oyl and wine, and then dipping a cloath in moisten *Patchgrease*, roul it about, and splint is as occasion shall serve, and so let it remain nine dayes, and dress it again, and at the end of the next nine dayes the Sheep will be able to go.

CHAP. XIII.

Of any sickness in Lambs.

IF your Lamb be sick, you shall give it *Mares-milk* or *Goat-milk*, or the own Dams milk and water to drink, and keep it very warm.

CHAP.

CHAP. XIV.

Of the Sturdy, turning-evil, or More-found.

THese diseases proceed from rankness of blood, which offendeth the brain, and other inward parts. The cure then is to let the Sheep blood in the eye-veins, temple-veins, and through the nostrils, then to rub the places with young Nettles bruised. The Cure.

CHAP. XV.

Of diseases in the eyes, as the Haw, dimness, or any soreness.

IF your Sheep have any imperfection in his eyes, you shall drop the juice of *Selandine* into them, and it is a present help.

CHAP. XVI.

Of water in a Sheeps belly.

IF a Sheep have water in his belly between the outward flesh and the rim, then you may safely adventure to let it forth by making a little hole through the flesh, and putting in a quill; but if it be between the rim and the bag, then it is incurable, for you may by no means cut the rim asunder. When the water is let forth, you shall stitch up the hole, and anoint it with Tar and Butter mixed together: this water if it remain in the body, will rot the sheep.

CHAP. XVII.

Of the Tag'd or Belt in Sheep.

A Sheep is said to be Tag'd or Belt, when by a continual squirt running out of his ordure, he berayeth his tail in such wise, that through the heat of the dung, it scaldeth, and breedeth the scab therein. The cure is, with a pair of sheers to cut away the tags, and to lay the fore bare and raw, and then to throw earth dryed upon it, and after that Tar and Goose-grease mixt together. The Cure.

CHAP.

CHAP. XVIII.

Of the Pox in Sheep.

The Cure. **T**He Pox in Sheep are small red pimples like Purples rising on the skin, and they are infectious. The cure is, to take *Rosemary*, and boil the leaves in vinegar, and bath the sores therewith, and it will heal them. Change of pasture is good for this disease, and you shall also separate the sick from the sound.

CHAP. XIX.

Of the Wood-Evil, or Cramp.

The Cure. **T**His disease is weakness or straitning of the sinews got by colds and surfeits: it is very mortal, and will run through a whole flock. The cure, is to take *Cinkfoil*, or *Five-led grass*, and boil in Wine, and give the Sheep a pint thereof to drink, and keep him warm, and chafe his legs with oyl and vinegar.

CHAP. XX.

Of making an Ewe to love her own Lamb, or any other Ewes Lamb.

IF an Ewe grow unnatural, and will not take her Lamb after she hath yeaned it, you shall take a little of the Clean of the Ewe, which is the bed in which the Lamb lay, and force the Ewe to eat it, or at least chew it in her mouth, and she will fall to love it naturally. But if an Ewe have cast her Lamb, and you would have her take to another Ewes Lamb, you shall take the Lamb which is dead, and with it rub and daub the live Lamb all over, and so put it to the Ewe, and she will take as naturally to it, as if it were her own.

CHAP. XXI.

Of licking up Poyson.

The Cure. **I**F a Sheep chance to lick up any poyson, you shall perceive it by a sudden swelling and reeling of the Sheep. And the cure is, as soon as you see it stagger, to open the mouth, and you shall find one or more blisters upon the tongues root, you shall presently break them with your fingers, and rub them with earth or Sige, and then piss into the Sheeps mouth, and it will do well.

CHAP.

CHAP. XXII.

Of Lambs yeaned sick.

IF a Lamb be yeaned sick and weak, the Shepheard shall fold it up in his cloak, blow into the mouth of it, and then drawing the Dams dugs, squirt milk into the mouth of it.

CHAP. XXIII.

Of making an Ewe to be easily delivered.

IF an Ewe can hardly bring forth or yeane her Lamb, you shall take Balsamins or Horsemin, and put either the juyc or powder of it into a little strong ale, and give it the Ewe to drink, and she will yeane presently.

CHAP. XXIV.

Of teeth loose.

IF a Sheeps teeth be loose, let him blood in his gums, and under his tayl, and then rub his teeth with Earth, Salt and Sage.

CHAP. XXV.

Of increasing Milk in Ews.

Nothing encreaseth Milk in Ewes more than change of pasture and feeding: driving them one while unto the hills, another while to the Valleys; and where the grass is sweetest and short, and the sheep eateth with best appetite, there see you continue longest: for touching, giving them Fitches, Dill, Anniseeds, and such like, this change of ground will make Milk spring much better.

CHAP. XXVI.

Of the staggers, or leaf sickness in Lambs, or elder Sheep.

THe Staggers is ingendered in sheep by surfeiting on Oak-leaves, hawthorn leaves, or such like, which Lambs are very apt unto: it is cold corrupt blood, or flegm, gathered together about the brain: indeed it is suddenly mortal. The best cure is to take *Assafurida*, dissolved in warm water, and put the quantity of half a spoonful into each ear of the sheep or Lamb, and it is a present remedy.

CHAP. XXVII.

Of Worms in the guts of Sheep or Lambs.

Sheep are as subject to worms in their guts or stomachs as any other cattle whatsoever, which you shall know by beating

The Cure.

ting their bellies with their feet, and by looking continually at their bellies. The cure is, to take the leaves of *Coliander*, and to stamp them, and then mixing the juyce thereof with hony, to give the Sheep to drink; and then chase him a little, and keep him two or three hours fasting.

CHAP. XXVIII.

Of the Iust of the Grud.

That which helpeth the Iust of the Grud in Ox or Cow the same is a present remedy for Sheep, and is spoke of before in a former chapter.

CHAP. XXIX.

Of saving Sheep from the Rot.

This disease of Rottiness is the cruellest of all other amongst Sheep, and extendeth his violence over all the flock: Nay, over Town-ships and Countries; and though it be held of most men incurable, yet good Government, and this Receipt I shall deliver you, will not only prevent it, but preserve your Sheep safe: Therefore, as soon as you perceive that any of your Sheep are tainted, you shall take *Adraces*, which is a certain salt gathered from the salt Marshes, in the heat of Summer, when the tide is going away, and leaving certain drops of salt water on the Grass, then the violent heat of the Sun turns it to salt; and to speak briefly, all salt made by the violence of the Suns heat only, is taken for *Adraces*, of which there is infinite store in Spain. With this *Adraces* rub the mouths of all your sheep once a Week, and you shall never need to fear the rotting of them, for it hath been well tried, and as I imagine, the experiment is found out from this very ground: It is a rule and well known at this day in *Lincolnsire*, and in *Kent*, that upon the Salt Marshes, sheep did never dye of the rot: no other reason being known therefore, but the licking up of that salt, and without doubt it is most infallible and most safe.

CHAP. XXX.

A few Precepts for the Shepheard.

IT is meet that very good and careful Shepheards know what food is good for Sheep, what hurtful: that following the one, and eschewing the other, he may ever keep his cattel in good health.

health. The grass that is most wholesome for Sheep, is that which hath growing in it good store of *Mellilot*, *Claver*, *Self-heal*, *Cinquefoil*, *Broom*, *Pimpernel*, and white *Flowers*.

The grass which is unwholesome for Sheep, is that which hath growing amongst it, *Sparrowwort*, *Pennywort*, or *Pennygrass*, and any weeds which grow from inundation or over-flows of water; likewise, *Knot-grass* is not good, nor mildewed grass. Of all Rots, the hunger Rot is the worst, for it both putrieth the flesh and skin, and this most incident to field Sheep, for to pasture Sheep it never hapneth. The next Rot to it is the pelt Rot, which cometh by great store of Rain, immediately after a Sheep is new shorn, which, mildewing the skin, corrupteth the body; and this also is most incident to field Sheep, which want shelter.

There be little white *Snails* which a Sheep will lick up, and they will soon rot him.

There will grow upon Ewes teats little dry scabs, which will stop their milk, when the Lambs suck; the Shepheard must have a care to pull them away.

A Sheep will have a bladder of water under his chin sometimes which the Shepheard must be careful to let out and lance, or the Sheep will not prosper.

It is not good to shear Sheep before Midsummer, for the more hee sweateth in his Wooll, the better and more kindly it is.

If you will know the age of your Sheep, look in his mouth; and when he is one shear, he will have two broad teeth afore; when hee is two shear, he will have four broad teeth afore; when he is three, he will have six; and when he is four shear, he will have eight; and after those years his mouth will begin to break. For touching that Rule of the evenness and unevenness of the month, it is uncertain, and faileth upon many occasions.

The end of the Sheep.

Of



Of Goats.

CHAP. I.

Of Goats and of their Natures.

Since Goats are not of any general use in our Kingdoms, but only nourished in some wild and barren places, where Cattle of better profit can hardly be maintained, as in the mountainous parts of *Wales*, in the barrenest parts of *Cornwal* and *Devonshire*, on *Malborn hills*; and some few about the *Peaks*; I will not stand upon any large discourse, but as briefly as I can, give you the natures and cures. You shall then know, that the Goat is a beast of a hot, strong and lusty constitution; especially in the act of generation; that they exceed all other cattle; delight to live in mountains that be high, craggy, and full of bushes, bryars, and other wood, they will feed in any plain pastures, but their special delight is in brousing upon Trees; they are so nimble of foot that they will go in places of greatest danger. The profit which comes from them is their milk, which is an excellent restorative, and their Kids which are an excellent Venison. They are in other countries, as in *Spain*, the Islands of *Azores*, and the Islands of the *Canaries*, preserved for the chase and for hunting, as we preserve our *Deer* both *Red* and *Fallow*, and make excellent pastime.

For the shape of the Goat: he would have a large body, and well haired, great legs, upright joints, not bending, a neck plain and short, a head small and slender, large horns, and bending, a big eye, and a long beard, and his colour white, black, or pike. Some do use to shear them, to make rough mantles of: but it is not so with us in *England*. The she Goat would have large teats and a big udder, hanging ears, and no horns as they have in many places.

The Nature
of Goats.

His shape.

The ordering
of Goats.

These Goats would be kept in small flocks, or herds, as not above

above a hundred in a herd. As they must in the heat of Summer have much shade, so in the winter like wise much shelter; for they cannot either endure extremity of heat nor cold. So daily the violence of winter must be avoided, and the fire must be kept, giving it fordrumity. The sign of the heat is, that the young goats give them other food to mix with it. The sign of the cold is, that the male and female go together, is about the beginning of December. If you house your Goats in the winter, let them have no Litter to lye on, but the floor paved, or gravelled, for otherwise their own heat will annoy them: they must also be kept very cleanly, for they can indure no filthy favours. For the young kids you shall in all parts order them as you do your Lambs.

Now for their preservation if they be suffered to go and chuse their own food, they are to themselves so good Physicians, that they will seldom or never be troubled with any inward sickness; only the unnatural excess of their lust maketh them grow soon old, and so both past use and profit. For those particular diseases which accidentally fall upon them: here followeth the cures.

CHAP. II.

Of the Pestilence in Goats, or any inward and hidden sickness.

If you perceive your Goats do droop, or look with sullen sad countenances, it is an assured sign of sickness; but if they foam or Lather at the mouth, then it is a sign of the Pestilence. The cure is, first, to separate them from the sound, then to let them bleed, and give them the Buds and Leaves of *Celandine* with rushes and reeds to eat, and it is a present remedy.

CHAP. III.

Of the Drop sic in Goats.

Goats are very much subject unto the Drop sic, through their excess of drinking water, the sign whereof is a great inflammation and heat in the skin: the cure is, to leech Wormwood in Water and Salt, and give a pint thereof to a Goat to drink divers mornings; for to slit and let out the water under the shoulder, is not so certain and safe a cure.

CHAP. IV.

The Cure

CHAP. IV.
Of curing the Teats.
If the Teats be sore, or the Goats be troubled with hardness in the Teats, a certain tough Ointment should be used, which will keep the Teats from swelling, which is thus made: Take of Saffron and your Chamber-pain a way, and beat them to powder with a mortar, and the Goats should mix together, to be anointed with the Ointment, and the Goats should mix together, to be anointed with the Ointment, and the Goats should mix together, to be anointed with the Ointment.

CHAP. V.
Of curing the Goats from being Killed.
Goats are all other cattle, and troubled with hardness in the Teats, a certain tough Ointment should be used, which will keep the Teats from swelling, which is thus made: Take of Saffron and your Chamber-pain a way, and beat them to powder with a mortar, and the Goats should mix together, to be anointed with the Ointment, and the Goats should mix together, to be anointed with the Ointment.

CHAP. VI.
Of curing the Goats from being Killed.
To heal any Teats, or dry Teats in Goats, take Black Soap, Tar, Hogs-grease, and Brimstone, mix them well together and anoint the fores therewith, and it will heal them.

CHAP. VII.
Of curing the Goats from being Killed.
If being Gilt in the Summer season, as those which are late added must necessarily be: the flye will be so busie with the fore, that with their blowings they will breed such store of Maggots in the wound, that it will indanger their lives: to defend them then from such annoyance of the flye, you shall take Soot, Tar, and thick Cream, and mix them well together, and anoint the wound therewith, and it will both heal it and keep the flye away.

CHAP. VIII.
Of the Itch in Goats.
If your Goats be troubled with any Itch, so that they cannot feed, or clawing or biting themselves, you shall wash their skin with old Chamber-lye, and green Coppervas well boyled together, and it will kill the Itch.

CHAP. IX.

And if the Goats be troubled with the CHAP. VI. Of the Cure of Goats.

Goats, when they are sucking on their dam, or when they are now Kidde, will commonly have a great lake or squirt, so that the Ordure which cometh from them; if it be not well skented and taken from them, it will with their own naturall heat be bake and dry, that it will stop the Tuel, so that they cannot dung, where if it be not holpen, the Kid will dye. The Cure is to cleanse the place, and open the Tuel, and then put into it an inch or thereabout of a small Candle and dip therein, and then anoint all the Tuel over with Capons grease, (no other)

The Cure.

CHAP. VII. Of the Scaggers, or swelling evill in Goats.

If your Goats be troubled with the Scaggers, or swelling evill, which is a disease bred in them by the worst heat of the Sun, you shall take Bay-sall and Velejan, and mix them together, and give the Goat half a pint thereof to drink; or else take Black-Salt, and Dragon, of each a like, (or grounde of them with a little new Milk: stamp the herbs, and then mingle them together, and put thereto a few grs. of Bay-sall, and give the Goat thereof then to it, and give the sick Goat three or four spoonfulls thereof to drink, and it will cure him. Now for any other infirmities which shall happen unto Goats, you may cure them with the same medicines which you cure Sheep, for their sicknesses are much like.

CHAP. VIII. Of the Cure of Goats.

CHAP. IX. Of the Cure of Goats.

CHAP. X. Of the Cure of Goats.

CHAP. XI. Of the Cure of Goats.

CHAP. XII. Of the Cure of Goats.

CHAP. XIII. Of the Cure of Goats.

CHAP. XIV. Of the Cure of Goats.

The Shape of a
Sheep.

ket. Therefore in the choice of sheep for your breed, have a principal respect to your Rams, for they ever mar or make a flock: let them as neer as you can have these properties or shapes. First, large of body in every general part, with a long body, and a large belly, his forehead would be broad, round and well rising, a cheerful large eye, strait short nostrils, and a very small muzzle; by no means any horns, for the dodder sheep is the best breeder, and his issue never dangereth the Dam in yeaining, as the horned sheep do: besides, those sheep which have no horns, are of such strength of head, that they have oft been seen to kill those sheep which have the largest horns, and best wrinkled. A Sheep would have a large upright neck, somewhat bending like the neck of a horse, a very broad back, round buttocks, a thick tail, and short joynted legs, small, clean, and nimble, his wooll would be thick and deep, covering his belly all over, also his face, and even to his nostrils, and downward to his very knees and hinder houghs. And thus according to the shape, propertie, and soil from whence you choose your Rams, choose the rest of your stock also.

When Ewes
should bring
f.r.h.

The best time for your Ewes to bring forth their young ones is, if they be pasture sheep, about the latter end of *April*, and so untill the beginning of *June*; but if they be field-sheep, then from the beginning of *January* till the end of *March*, that their Lambs may be strong and able before *May* day, to follow their Dams over the rough Fallow-lands, and Water-furrows, which weak Lambs are not able to do: and although you yearn thus early in the Winter, when there is no grass springing, and the sharpness of the weather also be dangerous, yet the husbandman must provide shelter and sweet fodder, and the Shepherd with great vigilance be stirred at all hours, to prevent evils, for the reasons before shewed, and though the Ewe at the first be scant of Milk, yet as the warm weather increaseth, and the grass beginneth to spring, so will her milk spring also.

Ordering
Lambs.

Now for your Lambs: about *Michaelmas* you shall separate the male from the female, and having chosen out the worthiest, which you mean to keep for Rams, put them aside, and then gueld the rest, which every orderly Shepherd can do sufficiently, for there is no danger in guelding young Lambs. The first year a male Lamb is called a Weather-hog, and a female Lamb

an

an Ewe-hog : the second year the male is a Weather , and the female a Theafe, and then she may be put to the Ram : but if you let her go over that year also, then she is a double Theafe, and will both her self be the goodlier sheep, and also bring forth the goodlier Lamb ; whence it comes, that the best Sheep-masters, make more account of the double Theafe, than of any other breeder.

You shall observe , never to shear your Lambs till they be full hogs : you shall ever wash three dayes before you shear : the best time of shearing is from *June* to *August*. Ewes are ever good breeders from three years old till their mouths break. If you would have your Ewes bring forth male Lambs, note when the North-wind bloweth, and driving your flock against the wind, let your Rams ride as they go, and this will make the Ewes to conceive male Lambs. So likewise , if you would have female Lambs, put your Rams to the Ewes when the wind bloweth out of the South,

Needful Observations.

Now for the general preservation of Sheep, feed them as much as you can upon high grounds, which are dry and fruitful , the grass sweet, yet so short that it must be got with much labour ; but if you must force per-force feed upon low and moist grounds which are infectious, you shall not bring your Sheep from the Fold, (for I now speak to the honest English husbandman) untill the Sun be risen, and that the beams begin to draw the dew from the earth ; then having let them forth , drive them to their place of Feed, and there with your dog chase them up and down till they be weary, and then let them either feed or take their rest, which they please. This chasing first, beateth away Mill-dews, and all other dews from the earth, as also those webs, kells, and flakes, which lying on the earth, and a Sheep licking them up, do breed rottenness. Also this chasing stirreth up that natural heat in a Sheep, which drinketh up, and waiteth the abundance of moisture ; which else would turn to rottenness. Besides, a Sheep being thus chased and wearied, will fall to his food more deliberately, and not with such greediness, as otherwise he would, and also make choice of that meat which is best for his health. If a Shepherd once in a month, or alwayes when he hath occasion to handle his Sheep, rub their mouths with Bay-salt, it

incurable it is held, yet it is certain, that if you take *Chervile*, and stamping it with old *Ale*, make a salve thereof, and annoint the sore therewith, it will kill the fire, and set the Sheep safe: and though some for this disease bury the first infected Sheep alive, with his heels upward, before the Sheep-coat door, yet this medicine hath ever been more effectual.

CHAP. X.

Of the disease of the Gall, as Choller, Jaundice, and such like.

THeſe diſeaſes are known by the yellowneſs of the Sheeps ſkin: and the cure is, to take *Plantane* and *Lettuce*, and ſtamping them together, mix their juice with vinegar, and give half a pint to a Sheep to drink.

CHAP. XI.

Of the tough ſlegm, or ſtopping in Sheep.

IF your Sheep be ſtopt in the head, breſt, or wealand, either with tough ſlegm, or other cold humours, which you ſhall know by the running of the noſtrils; then take the powder of *Pulioi-royal*, and mixing it with clarified hony, diſſolve it in warm water, the quantity of half a pint, and give it the Sheep to drink, and it will looſen the ſlegm.

CHAP. XII.

Of bones broken in Sheep, or bones out of joynt.

IF your Sheep chance to break a leg, or have any other bone miſplaced, you ſhall after you have ſet it ſtraight and right again, firſt bath it with oyl and wine, and then dipping a cloath in molten *Patchgreafe*, roul it about, and ſplint is as occaſion ſhall ſerve, and ſo let it remain nine dayes, and dreſs it again, and at the end of the next nine dayes the Sheep will be able to go.

CHAP. XIII.

Of any ſickneſs in Lambs.

IF your Lamb be ſick, you ſhall give it *Mares-milk* or *Goats-milk*, or the own Dams milk and water to drink, and keep it very warm.

CHAP.

CHAP. XIV.

Of the Sturdy, turning-evil, or More-found.

THese diseases proceed from rankness of blood, which offendeth the brain, and other inward parts. The cure then is to let the Sheep blood in the eye-veins, temple-veins, and through the nostrils, then to rub the places with young Nettles bruised.

The Cure.

CHAP. XV.

Of diseases in the eyes, as the Haw, dimness, or any soreness.

IF your Sheep have any imperfection in his eyes, you shall drop the juice of *Selandine* into them, and it is a present help.

CHAP. XVI.

Of water in a Sheeps belly.

IF a Sheep have water in his belly between the outward flesh and the rim, then you may safely adventure to let it forth by making a little hole through the flesh, and putting in a quill; but if it be between the rim and the bag, then it is incurable, for you may by no means cut the rim asunder. When the water is let forth, you shall stitch up the hole, and appoint it with Tar and Butter mixed together: this water if it remain in the body, will rot the sheep.

CHAP. XVII.

Of the Tag'd or Belt in Sheep.

A Sheep is said to be Tag'd or Belt, when by a continual squirt running out of his ordure, he berayeth his tail in such wise, that through the heat of the dung it scaldeth and breedeth the scab therein. The cure is, with a pair of sheers to cut away the tags, and to lay the fore bare and raw, and then to throw earth dried upon it, and after that Tar and Goose-grease mixt together.

The Cure.

CHAP.

CHAP. XVIII.

Of the Pox in Sheep.

The Cure.

THE Pox in Sheep are small red pimples like Purples rising on the skin, and they are infectious. The cure is, to take *Rosemary*, and boil the leaves in vinegar, and bath the sores therewith, and it will heal them. Change of pasture is good for this disease, and you shall also separate the sick from the sound.

CHAP. XIX.

Of the Wood-Evil, or Cramp.

The Cure.

THIS disease is weakness or straitning of the sinews got by colds and surfeits: it is very mortal, and will run through a whole flock. The cure, is to take *Cinkfoil*, or *Five-led grass*, and boil in Wine, and give the Sheep a pint thereof to drink, and keep him warm, and chafe his legs with oyl and vinegar.

CHAP. XX.

Of making an Ewe to love her own Lamb, or any other Ewes Lamb.

IF an Ewe grow unnatural, and will not take her Lamb after she hath yeaned it, you shall take a little of the Clean of the Ewe, which is the bed in which the Lamb lay, and force the Ewe to eat it, or at least chew it in her mouth, and she will fall to love it naturally. But if an Ewe have cast her Lamb, and you would have her take to another Ewes Lamb, you shall take the Lamb which is dead, and with it rub and daub the live Lamb all over, and so put it to the Ewe, and she will take as naturally to it, as if it were her own.

CHAP. XXI.

Of licking up Poyson.

The Cure.

IF a Sheep chance to lick up any poyson, you shall perceive it by a sudden swelling and reeling of the Sheep. And the cure is, as soon as you see it stagger, to open the mouth, and you shall find one or more blisters upon the tongues root, you shall presently break them with your fingers, and rub them with earth or Sige, and then piss into the Sheeps mouth, and it will do well.

CHAP.

CHAP. XXII.

Of Lambs yeaned sick.

IF a Lamb be yeaned sick and weak, the Shepheard shall fold it up in his cloak, blow into the mouth of it, and then drawing the Dams dugs, squirt milk into the mouth of it until it grow

CHAP. XXIII.

Of making an Ewe to be easily delivered.

IF an Ewe can hardly bring forth or yeane her Lamb, you shall take *Balsamint* or *Horsfemint*, and put either the juyce or powder of it into a little strong ale, and give it the Ewe to drink, and she will yeane presently.

CHAP. XXIV.

Of teeth loose.

IF a Sheeps teeth be loose, let him bleed in his gums, and under his tayls and then rub his teeth with Earth, Salt and Sage.

CHAP. XXV.

Of increasing Milk in Ewes.

Nothing encreaseth Milk in Ewes more than change of pasture and feeding: driving them one while unto the hills, another while to the Valleys: and where the grass is sweetest and short, and the sheep eateth with best appetite, there see you continue longest: for touching, giving them *Fisches*, *Dill*, *Annisecds*, and such like, this change of ground will make Milk spring much better.

CHAP. XXVI.

Of the staggers, or leaf sickness in Lambs, or elder Sheep.

THe Staggers is ingendered in sheep by surfeiting on Oak-leaves, hawthorn leaves, or such like, which Lambs are very apt unto: it is cold corrupt blood, or flegm, gathered together about the brain: indeed it is suddenly mortal. The best cure is to take *Assaferida*, dissolved in warm water, and put the quantity of half a spoonful into each ear of the sheep or Lamb, and it is a present remedy.

CHAP. XXVII.

Of Worms in the guts of Sheep or Lambs.

Sheep are as subject to worms in their guts or stomachs as any other cattel whatsoever, which you shall know by beating

The Cure.

ting their bellies with their feet, and by looking continually at their bellies. The cure is, to take the leaves of *Coliander*, and to stamp them, and then mixing the juyce thereof with hony, to give the Sheep to drink, and then chase him a little, and keep him two or three hours fasting.

CHAP. XXVIII.

Of the loss of the Crud.

That which helpeth the loss of the Crud in Ox or Cow the same is a present remedy for Sheep, and is spoke of before in a former chapter.

CHAP. XXIX.

Of saving Sheep from the Rot.

This disease of Rottenness is the cruellest of all other amongst Sheep, and extendeth his violence over all the flock: Nay, over Town-ships and Countries; and though it be held of most men incurable, yet good Government, and this Receipt I shall deliver you, will not only prevent it, but preserve your Sheep safe: Therefore, as soon as you perceive that any of your Sheep are tainted, you shall take *Adraces*, which is a certain salt gathered from the salt Marshes, in the heat of Summer, when the tide is going away, and leaving certain drops of salt water on the Grasse, then the violent heat of the Sun turns it to salt, and to speak briefly, all salt made by the violence of the Suns heat only, is taken for *Adraces*, of which there is infinite store in Spain. With this *Adraces* rub the mouths of all your sheep once a Week, and you shall never need to fear the rotting of them, for it hath been well tried, and as I imagine, the experiment is found out from this very ground: It is a rule and well known at this day in *Lincolnsire*, and in *Kent*, that upon the Salt Marshes, sheep did never dye of the rot: no other reason being known therefore, but the licking up of that salt, and without doubt it is most infallible and most easie.

CHAP. XXX.

A few Precepts for the Shepheard.

It is meet that very good and careful Shepheards know what food is good for Sheep, what hurtful: that following the one, and chiewing the other, he may ever keep his cattel in good health.

health. The grasse that is most wholesome for Sheep, is that which hath growing in it good store of *Mellilot*, *Claver*, *Self-heal*, *Cinquefoil*, *Broom*, *Pimpernel*, and white *Hebane*.

The grasse which is unwholesome for Sheep, is that which hath growing amongst it, *Sparrowwort*, *Pennywort*, or *Pennygrasse*, and any weeds which grow from inundation or over-flows of water; likewise, *Knot-grass* is not good, nor mildewed grasse. Of all Rots, the hunger Rot is the worst, for it both putrifieth the flesh and skin, and this most incident to field Sheep, for to pasture Sheep it never hapneth. The next Rot to it is the pelt Rot, which cometh by great store of Rain, immediately after a Sheep is new shorn, which, mildewing the skin, corrupteth the body; and this also is most incident to field Sheep, which want shelter.

There be little white Snails which a Sheep will lick up, and they will soon rot him.

There will grow upon Ewes teats little dry scabs, which will stop their milk, when the Lambs suck; the Shepheard must have a care to pull them away.

A Sheep will have a bladder of water under his chin sometimes which the Shepheard must be careful to let out and lance, or the Sheep will not prosper.

It is not good to shear Sheep before Midsummer, for the more hee sweateth in his Wool, the better and more kindly it is.

If you will know the age of your Sheep, look in his mouth; and when he is one shear, he will have two broad teeth afore; When hee is two shear, he will have four broad teeth afore; when he is three, he will have six; and when he is four shear, he will have eight; and after those years his mouth will begin to break: For touching that Rule of the evenness and unevenness of the mouth, it is uncertain, and faileth upon many occasions.

The end of the Sheep.



Of Goats.

CHAP. I.

Of Goats and of their Natures.

Since Goats are not of any general use in our Kingdom, but only nourished in some wild and barren places, where Cattle of better profit can hardly be maintained, as in the mountainous parts of *Wales*, in the barrenest parts of *Cornwal* and *Devenshire*, on *Malborn* hills, and some few about the *Peak*; I will not stand upon any large discourses, but as briefly as I can, give you the natures and cures. You shall then know, that the Goat is a beast of a hot, strong and lusty constitution, especially in the act of generation; that they exceed all other cattle in delight to live in mountains that be high, craggy, and full of bushes, bryars, and other wood, they will feed in any plain pastures, but their special delight is in brousing upon Trees; they are formidable of foot that they will go in places of greatest danger. The profit which comes from them is their milk, which is an excellent restorative, and their Kids which are an excellent Venison. They are in other countries, as in *Spain*, the Islands of *Azores*, and the Islands of the *Canaries*, preserved for the chase and for hunting, as we preserve our Dear both Red and Fallow, and make excellent pastime.

For the shape of the Goat: he would have a large body, and well haired, great legs, upright joints, not bending, a neck plain and short, a head small and slender, large horns, and bending, a big eye, and a long beard, and his colour white, black, or pike. Some do use to shear them, to make rough mantles of: but it is not so with us in *England*. The she Goat would have large teats and a big udder, hanging ears, and no horns as they have in many places.

These Goats would be kept in small flocks, or herds, as not above

The Nature
of Goats.

His shape.

The ordering
of Goats.

above a hundred in a herd. As they must in the heat of Summer have much shade, so in the winter like much shelter: for they can neither endure extremity of heat nor cold. Specially the violence of winter, which will make the skin black and hard, bringing it forth untimely. The best time to let them give them other food to mix with it. The best time to let the Male and Female go together, is about the beginning of December. If you house your Goats in the winter, let them have no Litter to lie on, but the floor paved, or gravelled, for otherwise their own sweat will annoy them: they must also be kept very cleanly, for they can endure no filthy favours. For the young Kids you shall in all parts order them as you do your Lambs.

Now for their preservation, if they be suffered to go and choose their own food, they are to themselves so good Physicians, that they will seldome or never be troubled with any inward sickness; only the unnatural excess of their lust maketh them grow soon old, and so both past use and profit. For those particular diseases which accidentally fall upon them, here followeth the cures.

CHAP. II.

Of the Pestilence in Goats, or any inward and hidden sickness.

If you perceive your Goats do droop, or look with sullen and sad countenances, it is an assured sign of sickness; but if they foam or Lather at the mouth, then it is a sign of the Pestilence. The cure is, first, to separate them from the sound, then to let them bleed, and give them the Buds and Leaves of *Celandine* with mules and weeds to eat, and it is a present remedy.

CHAP. III.

Of the Dropsie in Goats.

Goats are very much subject unto the Dropsie, through their excess of drinking water, the sign whereof is a great inflammation and heat in the skin: the cure is, to leech Wormwood in Water and Salt, and give a pint thereof to a Goat to drink divers mornings, for to slit and let out the water under the shoulder, is not so certain and safe a cure.

CHAP. IV.

The Cure.

CHAP. IV.
Of Suppling the Teats.
 If your Goats be troubled in the Teats of Goats, in certain tough
 and hard Stings, which will stop the milke from issuing, which
 to cure you shall wash with soft Saffron and your thumb pull it away,
 and then anoint the place with Saffron, and the Goats milke mixt
 together.

CHAP. V.
Of Goats that cannot Kid.

Goats have all other cattle, and troubled with hardness in
 their Kidneys, by reason that if they be chased or hunted their
 Kids will turn in their bellies: the remedy then to preserve them
 from that danger is to keep them quiet and untroubled, untill
 they have Kidled.

CHAP. VI.
Of the Teats in dry Season in Goats.

To heal any Tetter, or dry Scab in Goats take Black Soap,
 Tar, Hogs-grease, and Brimstone, mix them well together and
 anoint the sores therewith, and it will heal them.

CHAP. VII.

Of Culling Kids in the Summer season.

Kids being Cull in the Summer season, as those which are late
 Kidled must necessarily be: the fly will be so busie with
 the sore, that with their blowings they will breed such store of
 Maggots in the wound, that it will indanger their lives: to de-
 fend them then from such annoyance of the fly, you shall take
 Soot, Tar, and thick Cream, and mix them well together, and
 anoint the wound therewith, and it will both heal it and keep
 the flye away.

CHAP. VIII.

Of the Itch in Goats.

If your Goats be troubled with any Itch, so that they cannot
 feed for clawing or biting themselves, you shall wash their
 skins with old Chamber-lye, and green Coppas well boyled to-
 gether, and it will kill the Itch.

CHAP.

CHAP. IV.

Of the Tuel slipping in Goats.

Goats, when they are sucking on their dammes, or when they are new Kiddeed, will commonly have a great lake or squirt, so that the ordure which cometh from them; it is not well clenfed and taken from them; it will with their own naturall heat so bake and dry, that it will stop the Tuel, so that they cannot dung, whilst it is so, the Kid will dye. The cure is to cleanse the place, and open the Tuel, and then put into it an inch or thereabout of a small Candles end, dipt in Saffron, and then anoint all the Tuel over with Capons grease.

The Cure.

CHAP. V.

Of the Saggies, or swelling within Goats.

If your Goats be troubled with the Saggies or Roelling evil, which is a disease bred in them by the violent heat of the Sun, you shall take Bay-salt and Verjuice, and mix them together, and give the Goat half a pint thereof to drink; or else take Honey-suckle, and Dragons, of each a like quantity, pounde of them with a little new Milk; stamp the herbs, and then mingle them together, and then give the Goat a few grains of this, and then give both together, then set it, and give the sick Goat three or four spoonfulls thereof to drink, and it will cure her. Now for any other infirmities which shall happen unto Goats, you may cure them with the same medicines which you cure Sheep, for their natures do not much differ.

Of the choice and usage of Swine.

The Cure of the Saggies.



Of Swine.

CHAP. VI.

Of all manner of Spines, their nature, use, properties, and prescriptions.

Although Swine are accounted troublesome, in some manner, and greatly noxious, as indeed their natures are, yet the utility and profit of them, will easily wipe off those offences.

The Cure of the Saggies.

for to speak truly of the Swine, he is the Husbandmans best Scavenger, and the Huswifes most wholesome sink; for his food and living is by that which will else rot in the yard, make it headily, and breed no good manure, nor being cast down the ordinary sink in the house breeds no stinking smells, corruption, and infection: for from the Husbandman he taketh pulse, chaff, barn dust, mans ordure, garbage, and the weeds of his yard, and from the huswife he taketh, swillings, whey, washings of tubs, and such like, with which he will live and keep a good state of body, very sufficiently; and though he is accounted good in no place but the dish only, yet there he is so lovely and so wholesome, that all other faults may be borne with: he is by nature greedy, given much to roan up grounds and tear down fences, he is very lecherous, and that against his own and his hinds, he is subject to much anger, and the sight of the Boars are exceeding mortal; they can thus provoke and incite storms, winds, or foul weather, they are excellent blowers of their own homes, and exceeding great lovers of their swine: so that they will dye upon any beast that offendeth their smell.

Of the choice
and shape of
Swine.

Now touching the choice of Swine, you shall understand that no Country in England breedeth naturally better Swine, one hath more than another, but if any have preeminence, then I must prefer *Wiltshire*, and some parts of *Northamptonshire*, and clay countie bordering north of *Wiltshire*; and the reason I take to be, their great multiplicity of grain, especially beans and pulse. For the Mass countie, though they are good feeders, they are no large breeders, whence it comes that your wild swine is ever your least swine, but your worst bacon. And of the Race and keeping be alike, the proportion and goodness will be alike; therefore in the choice of your Swine, chiefly the Boars and Sows which you breed of, let them be long and large of body, deep sided, and deep belled, thick thighs, and short legs, for though the long-legged swine appear a goodly beast, yet he but causeth the eye and is not so profitable to the Butcher, high claws, thick neck, a short and strong groin, and a good thick chine well set with strong barries: the colour is best which is all of one peece, as all white, or all fawned, the black are the worst and most apt to take mearles, the black is tolerable, but our Kingdom through the coldness breedeth them feldome.

The

The use and profit of Swine is only (as the Husbandman saith) The use and profit of Swine.
 for the rooſt, which is bacon; for the ſpit, which is pork, ſowſe, and pudding; and for breed, which is their pigs only. To have too many Sowes in a yard is not good, for their increaſe and bringing forth is ſo great, that they will for want of food eat one another. A Sow will bring forth Pigs three times a year, namely, at the end of every ten weeks, and the number is great which they will bring forth: for I have known one Sow have twenty pigs at one Litter; twelve, fourteen, and ſixteen are very common; yet a Sow can bring up no more pigs than ſhe hath Teats, therefore look how many ſhe hath, and ſo many pigs preferve of the beſt, the reſt caſt away, or put to other Sowes which want, yet give ſuck. A Sow will bring pigs from one year old till ſhe be ſeven years old. The pigs which you rear, after you have choſen the beſt for Boars or Sowes to breed on, geld the reſt both male and females: the males will make goodly hogs, which are excellent Bacon or Pork; and the females, which are called Splayd-guelts, will do the like, and breed a great deal more greaſe in their bodies; whence it comes, that the Husbandman eſteems one ſplay'd-gwelt before two hogs. Young Shots, which are Swine of three quarters, or but one year old, are the daintieſt pork.

Now for the preſervation of Swine, it is contained in their government and food and is all that belongeth to that office of the Swine-herd. The orderlieſt feeding of Swine is, (when you keep them but in good ſtate of body, and not ſeek to fat them) in the morning early when you unſtie them, to give them draſſ, pulſe, or other garbage, with ſwilling in their troughs, and when they have eaten it, to drive them to the field, where they may graze and root for their food: and of Grounds the ſoft marſh and mooriſh grounds are the beſt, where they may get the roots of Sedge, Reeds, Ruſhes, Knot-graſs, and ſuch like; which is whoſſom for Swine, or the fallow or tythe-field, where they may root at pleaſure, and by killing the weeds bring profit to the Earth, and at the fall of the leaf it is good to drive them to hedges, where they may get Haws, Hips, Sloes, Crabs, or ſuch fruit, which is alſo very whoſſom; and the poor ſort will gather their fruits, and keep them ſafe to feed their Swine with all the Winter. When evening cometh, you ſhall drive your Swine home, and

then filling their troughs with draff and swillings: let them fill their bellies, and then tie them up, so shall you keep them from doing other hurts and injuries. If once in a fortnight you mixe with your swillings some Radle or red Oaker, it will preserve them wonderfully from meazles, and all inward infections: and thus much for the general discourse of Swine: now I will proceed to their particular infirmities, and other businesse.

CHAP. II.

Of the Fever, or any hidden sickness in Swine.

THere is no Beast maketh his sickness so apparent as the Swine; for when he findeth any grief or distemperature in his body, he presently droopeth, forsakes his meat, and will not eat till he find himself in a perfect recovery: therefore when you shall so find him to forsake his meat, you shall first let him bleed under his tail, and under his ears; and if they bleed not freshly enough, you shall beat them with a small stick, and that will bring forth the blood; then wrap about the wounds the bark of a young Officer, and then keep him warm, and give him to drink warm swillings, well mixt with Barley-meal, and red Oaker.

The Cure.

CHAP. III.

Of the Murren, Pestilence, or Cather in Swine.

THese diseases being all of one nature, are very much incident in Swine, and spring from many grounds, as from corruption in blood, ingendred by the eating of rotten fruit, or too much Butchers garbage, and many times by eating too rank grasse, wherein is much Hemlock: their particular signs are moist eyes, and their heads born on each side; but their general knowledge is their fasting and mortality. The Cure is to give them in warm Wash Hens-dung, and boyl'd Liverwort, with a little Red Oaker.

The Cure.

CHAP. IV.

Of the Gall in Swine.

Swine will have an overflowing of the Gall, because Choler is much powerful in them, which you shall know by a swelling which will rise under their jaws; and the cure is, to stamp Gall-wort or Saffron, and mix it with honey and water, and then strain.

The Cure.

straining it, give it the Swine to drink by a Pint at a time.

CHAP. V.

Of the Meazles in Swine.

THis disease of all other is most common in Swine, and with ease helped, as thus: you shall take the oldest Urine you can get, and mix it with red Oaker till it be thick, and about the quantity of an Ale-quart, then mix it with a Gallon of warm sweet Whey, and give it the Swine to drink after he hath been kept all night fasting.

CHAP. VI.

Of Imposthumes in any part of a Swine.

SWine will have Imposthumes in any part of their bodies, as under their throats, their ears, bellies, and oft upon their sides. The Cure is, if they be soft, to lance them, and let out the matter, and then heal them with Tar and Butters; but if they be not soft, then let the Swine blood under the tongue, and rub all his mouth, chaps, and groin, with wheat-meal and salt, and the Imposthume will go away.

CHAP. VII.

Of Vomiting in Swine.

IF your Swine do vomit and cast up his meat, you shall give him spelted Beans to eat, and they will strengthen his stomach.

CHAP. VIII.

Of leanness, mislike, scurf, and manginess in Swine.

THese diseases proceed from corruption of blood, ingendred by lying wet in their Sties, having filthy rotten litter, or much scarcity of meat. The Cure is, first to let the Swine blood under the tail, then to take a Wool-card, and to comb off all the scurf and filth from the Swines back, even till his skin bleed: Then take Tarre, Hogs-grease and Brimstone, and mixing them well together, anoint the Swine therewith, then let the Stye be mended, his Litter be sweet, and give him good warm food, and the Swine will be fat and sound very suddenly.

The Cure.

CHAP. IX.

Of the Sleeping Evil in Swine.

The Cure.

Swine are much subject to this disease in the Summer-time, and you shall know it by their continual sleeping and neglecting to eat their meat. The cure is, to house them up, and keep them fasting twenty four hours, then in the morning when hunger pincheth them, to give them to drink water, in which is stamp good store of *Stone-crop*, which as soon as they have drunk they will vomit and cast, and that is a present remedy.

CHAP. X.

Of pain in the Milks.

The Cure.

Swine are oft troubled with pain in their Milks, or Spleens, which proceedeth from the eating of Mast, when they are first put thereunto, through their over-greedy eating thereof, and is known by a reeling going of one side. The cure is, to give them the juice of Wormwood in a little honied water, to drink, and it will assuage the pain.

CHAP. XI.

Of the Unnaturalness of Sows.

Many Sows do prove so unnatural, that they will devour their pigs when they have farrow'd them, which springeth from an unnatural greediness in them; which to help, you must watch her when she farroweth, and take away the pigs as they fall, then take the wreckling, or worst pig, and anoint it all over with the juice of *Stone-crop*, and so give it the Sow again; and if she devour it, it will make her cast and vomit so extremely, that the pain of her Surfeit will make her loath to do the like again. But of all Cures, the best for such an unnatural Beast, is to feed her well, and then kill her.

CHAP. XII.

Of the Laxe or Flux in Hogs.

For the Laxe or Flux in Swine, you shall give them Verjuice and milk mixt together to drink, and then feed them with food, as specked Beans, Acorns, or Acorn-bushs. This is also excellent and approved for young Pigs and Shots, when they have any scouring.

CHAP.

CHAP. XIII.

Of the lugging of Swine with Dogs.

IF your Swine be extreemly lugged and bitten with dogs, to prevent the rankling, and imposthumation of the Sore, you shall anoint it with vinegar, sope, and tallow mixt together, and it will cure the same.

CHAP. XIV.

Of the Pox in Swine.

THE Pox is a filthy and infectious disease in Swine, proceeding from corrupt blood, ingendered by poverty, wet lying, lowliness, and such like, and the Swine can never prosper which hath them. The cure is, to give them first to drink two Spoonfuls of London-Treacle, in a pint of *bonied water*, which will expell the infection outwardly, then to anoint the sores with *Brimstone* and *Boars-grease* mixt together, and so separate the sick from the sound.

The Cure.

CHAP. XV.

Of killing Maggots in the Ears or other parts of Swine.

IF Maggots shall breed in the Ears of your Swine, which have been lugged with dogs for want of good looking unto, as often it happeneth; you shall take either the sweetest Wort you can get, or else honey, and anoint the Sores therewith, and the Maggots presently will fall off and dye.

CHAP. XVI.

Of feeding Swine exceeding fat, either for Bacon or for Lard.

DIVERS men, according to the nature of divers Countries, have divers wayes in feeding of their Swine, as those which live near unto Woods and places where store of Mast is, turn their Swine into Mast for six or eight weeks, and then having got flesh and fatness on their backs do bring them home, and put them up in Sties, and then feed them for ten dayes or a fortnight after with old dry pease, given them oft in the day, a little at once, with Water as much as they will drink: for this will harden the flesh and fat, so that it will not consume when it comes to boyling; this manner of feeding is good, and not to be disliked.

The feeding of Swine in Wood-Countries.

New

The feeding
of Swine in
Champion
Countries,

Now the feeding of Swine in Champion Countries, which are far from Woods, is in this manner. First, you shall stie up those Swine which you intend to feed, and let them not come out of the same until they be fed, but have their food and water brought unto them. Now the first two dayes you shall give them nothing, the third day you shall early in the morning give them a pretty quantity of dry pease or beans; at noon you shall give them as much more, at four of the clock as much more, and when you go to bed as much more, but all that day no water. The next day you shall feed them again at the same hours, and set water by them, that they may drink at their own pleasure, and twice or thrice a week, as your provision will serve you, it is good to fill their bellies with sweet Whey, Butter-milk, or warm Wash, but by no means scant the proportion of their Pease; and by thus doing you shall feed a Swine fat enough for the slaughter in four or five weeks.

Of feeding at
the Reek.

There be other Husbandmen in Champion Countries, as in *Leicestershire*, and such like, that put their Swine to Pease Reeks, or Stacks set in the field near unto water-furrows or rundles, so that they may let the water into the Stack-yard, and then morning and evening cut a cutting of the Stack or Reek, and spread the reaps among the Swine. This manner of feeding is best for small Porkets, and will fat them very reasonable in three weeks or a month. If you feed Sheep amongst your Porks, it is very good, and daily by many practised; for by that means you shall not lose any of your grain; for what your Sheep cannot gather up, your Porkets will.

Of feeding of
Swine in or about
great Cities.

Now for such as live in or near about great Cities or Towns, as *London*, *York*, or such like, and have neither great store of Mash, nor great store of grain; yet they have a manner of feeding as good, and somewhat more speedier than any of the other, only the Bacon is not so sweet or toothsome, and thus it is. They stie up their farlings, as is before said, and then take Chandlers grains, which is the dregs and offall of rendred Tallow, as hard skins, kels, and fleshy lumps, which will not melt together with other course skins of the Tallow, Suet, or Kitchen-lee, and mixing it in warm Mash, give it the Swine to eat three or four times in the day, and it will suddenly put him up with fatness, then bestow

of every Swine a bushel of dry Pease to harden his flesh, and you may kill them at your pleasure. The only danger of this food is, it will at first sometimes make Swine scour, especially young Pigs if they eat it: but as soon as you perceive such a fault, give unto your elder Swine milk, and Verjuice, and to your sucking Pigs Verjuice only.

Now lastly, the best feeding of a Swine for Lard, or a Boar for Brawn, is to feed them the first week with Barly sodden till it break, and sod in such quantity that it may ever be given sweet; then after to feed them with raw malt from the floor, before it be dryed, till they be fat enough; and then for a week after, to give them dry Pease or Beans to harden their flesh. Let their drink be the washing of Hogheads, and Ale-barrels, of sweet Whey, and let them have store thereof. This manner of feeding breeds the whitest, fattest, and best flesh that may be, as hath been approved by the best Husbands.

Offeeding of
Hogs for Lard,
or Boars for
Brawn.

The end of the Swine of all Sorts.

Of Conies.

CHAP. I.

*Of the tame rich Coney, his nature, choice, profit, and
Preservation.*

ALL sorts of Conies may as well be kept tame as wild, and do above all other beasts delight in imprisonment and solitariness, which proceedeth from the strength of melancholly in their nature, being creatures so much participating of the earth, that their delight is to live in holes, rocks, and other dark caverns. They are violently hot in the act of generation, and perform it with such vigor and excess, that they swoon and lye in trances a

The nature of
the Coney.

good

good space after the deed is done. The males are given to much cruelty, and would kill the young Rabbits if he could come to them: whence it proceedeth, that the females after they have kindled, hide their young ones, and close up the holes, so that the Buck-coney may not find them. The female or Doe-conies are wonderful in their increase, and bring forth young ones every month, therefore when you keep them tame in boxes, you must observe to watch them, and as soon as they have kindled, to put them to the Buck, or otherwise they will mourn, and hardly bring up their young ones.

Of Boxes for
tame Conies.

The Boxes in which you shall keep your tame Conies, would be made of thin Wainscot boards, some two foot square, and one foot high; and that square must be divided into two rooms, a greater room with open windows of wire, through which the Coney may feed; and a lesser room without light, in which the Coney may lodge and kindle, and before them both a trough in which you may put meat and other necessities for the coney, and thus you may make box upon box in divers stories, keeping your Bucks by themselves, and your Does by themselves, except it be such Does as have not bred, and then you may let a Buck lodge with them; also when your Doe hath kindled one nest, and then kindleth another, you shall take the first from her and put them together in a several Box amongst Rabbits of their own age, provided that the box be not pestered, but that they have ease and liberty.

Of the choice
of rich Conies.

Now for the choice of these tame rich Conies you shall not as in other cattel look to their shape, but to their richness; only elect your Bucks by the largest and goodliest Conies you can get: and for the richness of the skin, that is accounted the richest, which hath the equallest mixture of black and white hair together, yet the black rather shadowing the white, than white any thing at all over-mastering the black, for a black skin with a few silver hairs is much richer than a white skin with a few black hairs; but as I said before, to have them equally or indifferently mixt is the best of all other. The Fur would be thick, deep, smooth, and shining; and a black coat without silver hairs, though it be not reckoned a rich coat, yet it is to be preferred before a white, a pyed, a yellow, a dun, or gray.

Now

Now for the profit of these rich Conies, (for unless they did far away and many degrees exceed the profit of all other conies they were not worth the charge which must be bestowed upon them) it is this; First, every one of the rich conies which are killed in season as from *Marilmas* untill after *Candlemas*, is worth any five other Conies, for they are of body much fatter and larger, and when another skin is worth two pence or three pence at the most, they are worth two shillings, or two shillings and sixpence. Again, they encrease oftner, and bring forth more Rabbits at one kindling then any wild Cony doth: they are ever ready at hand for the dish, Winter and Summer, without charge of Nets, Ferrets, or other Engines, and give their bodies gratis, for their skins will ever pay their Masters charge with a most large interest.

Now for the feeding and preservation of these rich Conies, it is nothing so costly or troublesome as many have imagined, and as some ignorant in the skill of keeping them, have made the World think: for the best food you can feed a Cony with, is the sweetest, shortest, softest, and best hay you can get, of which one load will serve two hundred couples a year, and out of the flock of two hundred, you may spend in your house two hundred and sell in the market two hundred more, yet maintain the stock good, to answer every ordinary casualty. This hay in little cloven sticks might with ease reach it and pull it out of the same yet so as they may not scatter nor waste any. In the Troughs under their boxes, you shall put sweet Oats and their water, and this should be their ordinary and constant food wherewith you shall feed your Conies, for all other should be used but Physically, as for the preservation of their health: as thus you shall do twice or thrice in a fortnight for the cooling of their bodies, give them Greens, as Mallows, Claver-grass, Sower-docks, blades of Corn, Cabbage or Colwort leaves, and such like, all which cooleth and nourisheth exceedingly: some use to give them sometimes sweet grains, but that must be used seldom, for nothing sooner rotteth a Cony.

You must also have great care, that when you cut any grasse for them that are weeds, that there grow no young Hemlock amongst it, for though they will eat it with great greediness, yet it

Of the feeding
and preservation
of Conies.

is a present poyson, and kills suddainly, you must also have an especial care every day to make their boxes sweet and clean, for the strong savour of their ordure and piss is so violent, that it will both annoy themselves, and those which shall be frequent amongst them.

Of the Rot in
Conies.

Now for the infirmities which are incident unto them, they are but two: The first is rottenness, which cometh by giving them too much green meat, or gathering their greens and giving it them with the dew on: therefore let them have it but seldom, and then the dryness of the Hay will ever drink up the moisture, knit them and keep them sound without danger.

Of madness
in Conies.

The next is a certain rage of madness, ingendred by corrupt blood, springing from the rankness of their keeping, and you shall know it by their wallowing and tumbling with their heels upward, and leaping in their boxes. The Cure is, to give them *Harribistle* to eat, and it will heal them. And thus much of the tame rich Coney, and his properties.

The end of the Four-footed Beasts.



The Second Book.

Of Poultry.

CHAP. I.

Containing the ordering, fattening, cramming, and curing of all infirmities of Poultry, as Cocks, Hens, Chickens, Capons, Geese, Turkeys, Pheasants, Partridges, Quails, House-doves, and all sorts of Fowl whatsoever. And first of the Dungehill Cock, Hen, Chicken, and Capon.

Some small thing hath been written of this nature before, but so drawn from the Opinions of old Writers, as *Italians*, *French*, *Dutch*, and such like, that it hath no coherence or congruity with the practice and experience of English Customs, both

both their Rules and Climes being so different from ours, that except we were to live in their Countries, the Rules which are printed are useles, and to no purpose. To let pass then the opinion of strangers, and come to our own home-bred knowledg which is so mixed with all profitable experiments, that it needeth not the help of other Nations so much, as men would make us believe.

You shall understand that the Dunghill Cock (for the fighting Cock deserveth a much larger and particular discourse) is a soul of all others birds the most manliest, stately, and majestical, very tame and familiar with the man, and naturally inclined to live and prosper in habitable Houses: he is hot and strong in the act of generation, and will serve ten Hens sufficiently, and some twelve and thirteen: he delighteth in open and liberal plains; where he may lead forth his Hens into green pastures and under hedges; where they may warm and bath themselves in the Sun; for to be pent up in walled places, or in paved Courts, is most unnatural unto them, neither will they prosper therein.

Of the Choice
and Shape of
the Cock.

Now of the choyce and shape of the Dunghill Cock, he would be of large and well sized body, long from the head to the Rump, and thick in the garth; his neck would be long, loose, and curiously bending it and his body together, being straight and high up erected, as the Faulcon and other birds of prey are; his comb, wattles and throat would be large, of great compass, ragged, and very Scarlet red; his eyes round and great, the colour answering the colour of his plume or male, as gray with gray, red with red, or yellow with yellow, his bill will be croked, sharp, and strongly set on to his head, the colour being suitable with the colour of feathers on his head, his main or neck-feathers would be very long, bright, and shining, coveting from his head to his shoulders, his legs straight and of a strong beam, with large long spurs sharp and a little bending, and the colour black, yellow or brownish, his claws short, strong, and well wrinkled, his tayl long, and covering his body very closely, and for the general colour of the Dunghill Cock it would be red, for that is medicinal, and oft used in culliffs and restoratives. This Cock should be valiant within his own walk, and if he be a little Knavish, he is so much the better; he would be oft crowing and bulie in scratching the earth to find out Worms and other food for his Hens.

Of the Hen
her choyce
and shape.

Now for the Hen, if she be a good one, she should not differ much from the nature of the Cock, but be valiant, vigilant and laborious both for her self and her Chickens. In shape the biggest and largest are the best, every proportion answering those before described of the Cock, only instead of her comb she should have upon her crown a high thick tuft of feathers: to have many and strong claws is good, but to want hinder claws is better, for they oft break the eggs, and such Hens sometimes prove unnatural, it is not good to choose a crowing Hen, for they are neither good breeders nor good layers. If you choose Hens to sit, choose the elder, for they be constant, and will sit out their times; and if you will choose Hens to lay, choose the youngest; for they are lusty and prone to the act of ingendring; but for neither purpose choose a fat Hen, for if you set her, she will forsake her nest, and if you keep her to lay, she will lay her eggs without shells. Besides, a fat Hen will waxe sloathful, and neither delight in the one, nor in the other Act of Nature; such Hens then are fittest for the dish then the Hen-house.

Of Setting
Hens.

The best time to set Hens to have the best, largest, and most kindly Chickens, is in *February*, in the increase of the Moon, so that she may hatch or disclose her Chickens in the increase of the next new Moon, being in *March*; for one brood of *March* Chickens is worth three broods of any other: you may set Hens from *March* till *October*, and have good Chickens, but not after by any means; for the Winter is a great enemy to their breeding. A Hen doth sit twenty one dayes just, and then hatcheth; but Pea-hens, Turkeys, Geese, Ducks, and other Water-fowl sit thirty: so that if you set your Hen as you may do upon any of their Eggs, you must set her upon them nine dayes before you set her upon her own. A Hen will cover nineteen Eggs well, and that is the most in true rule, she should cover, but upon what number soever you set her, let it be odd, for the Eggs will lye round, close, and in even proportion together; it is good when you lay your eggs first under your Hens, to mark the upper side of them, and then to watch the Hen, to see if she busie her self to turn them from the one side to the other, which if you find she doth not, then when she riseth from her eggs to feed or bath her self, you must supply that office, and turn every egg it self, and esteem your hen

of so much the less reckoning for the use of breeding: be sure that the Eggs which you lay under her, be new and sound, which you may know by their heaviness, fulness, and clearness, if you hold them up betwixt the Sun and your eye-sight; you must by no means at any time raise your Hen from her nest, for that will make her utterly forsake it.

Now for helping a Hen to hatch her eggs, or doing that which should be her office, it is unnecessary, and shall be much better to be forborn then any way used; or to make doubt of bringing forth, or to think the Hen sitteth too long, as many curious House-wives do, if you be sure you set her upon sound Eggs, is as frivolous: but if you set her upon unsound Eggs, then blame your self both of the loss and injury done unto the Hen in her loss of labour.

Choyce of Eggs.

A Hen will be a good fitter from the second year of her laying to the fifth, but hardly any longer; you shall observe ever when your Hen riseth from her nest, to have meat and water ready for her, lest straying too far to seek her food, she let her eggs cool too much, which is very hurtful. In her absence you shall stir up the straw of her nest, and make it soft and handsome, and lay the eggs in order as she left them: do not in the election of your Eggs choose those which are monstrous great, for they many time have two yolks; and though some write, That such Eggs will bring out two Chickens, yet they are deceived; for if they bring forth two, they are commonly most abortive & monstrous: to perfume the nest with brimstone is good, but with Rosemary much better. To set Hens in the Winter-time in Stows or Ovens is of no use with us in England, and though they may by that means bring forth, yet will the Chickens be never good nor profitable, but like the planting of Lemons and Pomegranate-trees, the fruits will come a great deal short of the charges. When your Hen at any time is absent from her nest, you must have great care to see that the Cock come not to sit upon the Eggs, (as he will offer to do) for he will indanger to break them, and make her love her nest worse.

As soon as your Chickens be hatcht, if any be weaker then the other, you shall rap them in Wool, and let them have the ayr of the fire, and it will strengthen them: to perfume them with a little

Of Chickens.

the

the Rosemary is very wholesome also, and thus you may in a sieve keep the first hatche Chickens till the rest be disclosed, (for Chickens would have no meat for two dayes) and some shells being harder than other, they will take so much distance of time in opening; yet unless the Chickens be weak, or the Hen rude, it is not amiss to let them alone under her, for she will nourish them most kindly: after two dayes is past, the first meat you give them should be very small Oatmeal, some dry, and some steeped in milk, or else fine wheat bread crumbs; and after they have got strength, then Curds, Cheese-parings, white-bread crust soak'd in Milk or Drink, Barly meal, or Wheat bread scalded, or any such like soft meat that is small, and will easily be divided. It is good to keep Chickens one fortnight in the house, and after to suffer them to go abroad with the Hen to worm, for that is very wholesome to chop green Chives amongst your Chickens meat, will preserve them from the Rye, and other diseases in the head; neither must you at any time let your chickens want water, for if they be forced to drink in puddle, it will breed the Pip: also to feed upon Tares, Darnel, or Cockle is very dangerous for young chickens.

Of feeding
and cramming
Chickens.

You may by these foods aforesaid, feed chickens very fat under their dams: but if you will have fat crammed chickens, you shall coop them up when the Dam forsakes them, and the best crams for them is wheat-meal and milk, made into dough, and then the crams steeped in milk, and so thrust down their throats: but in any case let the crams be small, and well wet for choaking: fourteen dayes will feed a Chicken sufficiently: And thus much briefly for your breed.

Of preserving
Eggs.

Now because eggs of themselves are a singular profit, you shall understand, that the best way to preserve or keep them long, is as some think, to lay them in good straw, and cover them close; but that is too cold, and besides will make them ruffy: others will lay them in bran, but that is too hot, and will make them putrify: and others will lay them in salt, but that makes them waste and diminish: the best way then to keep them most sweet, most sound, and most full, is only to keep them in a heap of old Malt, close and well covered all over.

Of gathering
Eggs.

You shall gather your eggs up once a day, and leave in the nest but the nest-egg, and no more: and that would ever be in the after-

afternoon, when you have seen every Hen come from her nest severally: some Hens will by their cackling tell you when they have laid, but some will lay mute; therefore you must let your own eye be your instructor.

Now touching the Capon, which is the guele Cock-chicken, Of the Capon you shall understand, that the best time to carve or guele, is as when to carve soon as the Dam hath left them, if the trones be come down, or him. else as soon as they begin to crow: for the art of carving it self, it is both easie and common, and much sooner to be learned by seeing one carved, then by any demonstration in writing.

These Capons are of two uses: The one is to lead Chickens, A Capon to lead Chickens. Ducklings, young Turkeys, Pheasants and Partridges, which he will do altogether, both naturally and kindly, and through largeness of his body, will brood or cover easily thirty or five and thirty; he will lead them forth so safely, and defend them against Kites or Buzzards, more and better then the Hens; therefore the way to make him to take unto them is, with a fine small briar or else sharp nettles at night, to beat and sting all his breast and neck parts, and then in the dark to seat the Chickens under him, whose warmth taketh away his smart; he will fall much in love with them, and whensoever he proveth unkind you must sting, or beat him again, and this will make him never forsake them.

The other use of Capons is, to feed for the dish, as either at Of feeding or the Barn door, with scraps of corn, and the shavings of pulle, or cramming else in pens in the house, by cramming them, which is the most Capons. dainty: the best way then to cram a Capon, (setting all strange inventions apart) is to take Barley-meal reasonably sifted, and mixed with new milk, make it into a good stiff dough; then make it into long crams, bigger in the midst, and small at both ends, and then wetting them in lukewarm milk, give the Capon a full gorge thereof three times a day: morning, noon and night, and he will in a fortnight or three weeks, be as fat as any man need to eat.

As for mixing their crams with sweet Wort, Hogs greafe, or Sallet oyl, they are by experience found to breed loath in the Birds, and not to feed at all: only keep this observation, not to give your Capon new meat until the first be put over. And if you

you find your Capon something hard of digestion, then you shall sift your meal finer, for the finer your meal is, the sooner it will pass through their bodies. And thus much for the Capon. Now for their infirmities, they follow in order.

CHAP. II.

Of the Pip in the Poultry.

THe Pip is a white thin scale, growing on the tip of the tongue, and will make Poultry that they cannot feed: it is easie to be discerned, and proceedeth generally from drinking puddle water, from want of water, or from eating filthy meat. The Cure is to pull off the scale with your nayl, and then rub the tongue with salt.

The Cure.

CHAP. III.

Of the Roup in Poultry.

THe Roup is a filthy byle or swelling on the Rump of Poultry, and will corrupt the whole body. It is ordinarily known by the staring and turning backward of the feathers: The Cure is, to pull away the feathers, and open the sore, to thrust out the core, and then wash the place with salt and water, or with brime, and it helpeth.

The Cure.

CHAP. IV.

Of the Flux in Poultry.

THe Flux in Poultry cometh with eating too much moyr meat. The Cure is, to give them pease bran scalded, and it will stay them.

The Cure.

CHAP. V.

Of Stopping in the Belly.

Stopping in the Bellies of Poultry, is contrary to the Flux, so that they cannot mite: therefore you shall anoint their Vents, and then give them either small bits of bread, or Corn steeped in mans Urine.

CHAP. VI.

Of Lice in Poultry.

If your Poultry be much troubled with Lice, as it is a common infirmity

infirmity

infirmity, proceeding from corrupt food, or want of bathing in sand, ashes, or such like : you shall take Pepper small beaten, and mixing it with warm water, wash your Poultry therein, and it will kill all sorts of vermine.

CHAP. VII.

Of stinging with venomous Worms.

IF your Poultry be stung with any venomous thing, as you may perceive by their lowring and swelling, you shall then anoint them with Rew and Butter mixt together, and it helpeth.

CHAP. VIII.

Of sore eyes in Poultry.

IF your Poultry have sore eyes, you shall take a leaf or two of Ground-Ivy, and chawing it well in your mouth, suck out the juice and spit into the sore eye, and it will most assuredly heal it, as it hath been often tried.

CHAP. IX.

Of Hens that crow.

IF your Hens crow, which is an ill sign and unnatural, you shall pull their wings, and give her to eat either Barley scorched, or small Wheat, and keep her close from other Poultry.

CHAP. X.

Of Hens that eat their Eggs.

IF your Hen will eat her Eggs, you shall only lay for her Nest-egg a piece of Chalk cut like an Egg, at which by pecking and losing her labour she will refrain the evil.

CHAP. XI.

Of keeping a Hen from sitting.

IF you would not have your Hen sit, you shall bath her oft in cold water, and thrust a small feather through her nostrils.

CHAP. XII.

Of making Hens lay soon and oft.

IF you feed your Hens often with coasts taken out of Ale, with Barty boy'd, or spelted fitches, they will lay soon, oft, and all the winter.

CHAP. XIII.

Of making Hens lean.

BEcause fat Hens commonly either lay their Eggs without shels, or at the best hand lay very small Eggs; to keep them lean, and in good plight for laying, you shall mix both their meat and water with the powder of Tile-theards, Chalk, or else Tares, twice or thrice a week.

CHAP. XIV.

Of the Crow-trodden.

IF your Hen be trodden with a Carrion-Crow, or Rook, as oft they are, it is mortal and incurable, and you shall know it by the staring up of her feathers, and hanging of her wings, there is no way with her then but presently to kill her.

CHAP. XV.

Of the Hen-house, and situation.

NOW forasmuch as no Poultry can be kept either in health or safety abroad, but must of force be housed, you shall understand, that your Hen-house would be large and spacious, with somewhat a high roof, the walls strong, both to keep out thieves and vermine, the windows upon the Sun-rising, strongly lathed, and close shuts inward. round about the inside of the walls. Upon the ground would be built large Pens of three foot high for Geese, Ducks, and great fowl to sit in. Near to the eavings of the house would be long Peaches, reaching from one side of the house to the other, on which should sit your Cocks, Hens, Capon, and Turkeys, each on several Peaches, as they are disposed: at another side of the house, in that part which is darkest over the ground-pens, would be fixed Hampers full of straw for Nests, in which your Hens shall lay their eggs, but when they sit to bring forth chickens, then let them sit on the ground, for otherwise it is dangerous: let there be pins stricken into the wall, so that your Poultry may climb to their peaches with ease: let the floor by no means be paved, but of earth smooth and easie; let the smaller fowl have a hole at one end of the house, made to come in and out at when they please, or else they will seek roost in other places; and for the greater fowl the door may be opened evening and morning. This house should be placed either

either near some Kitchin, Brew-house, or else some Kilt, where it may have air of the fire, and be perfumed with smoak, which to Pullen is delightful, and wholsom. And thus much of the Cock, Hen, Capon, and Chicken.

CHAP. XVI.

Of Geese, their nature, choice, and how to breed them.

Geeſe are a fowl of great profit many wayes, as firſt for food, next for their feathers, and laſtly for their greaſe. They are held of Husbandmen to be fowl of two lives, becauſe they live both on land and water; and therefore all men muſt underſtand that except he have either Ponds or Stream, he can never keep Geefe well. They are ſo watchful and careful over themſelves, that they will prevent moſt dangers. Graſs alſo they muſt neceſſarily have, and the worſt, and that which is the moſt uſeleſs is the beſt, as that which is mooriſh, rotten, and unſavory for cat-tel. To good graſs they are a great enemy, for their dung and treading will putriſie it, and make it then barren.

Now for the choice of Geefe, the largeſt is the beſt, and the colour would be white or gray, all of one pair, for pide are not ſo profitable, and black are worſe. Your Gander would be knaviſh and hardy, for he will defend the Goſlings the better.

Now for the laying of Eggs, a Goole beginneth to lay in the Spring, and ſhe that layeth earlieſt is ever the beſt Goole, for ſhe may have a ſecond hatch. Geefe will lay twelve, and ſome ſixteen Eggs, ſome will lay more, but it is ſeldom, and they cannot be all well covered. You ſhall know when your Goole will lay, by her carrying ſtraw up and down in her mouth, and ſcattering it abroad: and you ſhall know when ſhe will ſit, by her continuing on the neſt till after ſhe hath laid. You muſt ſet a Goole upon her own Eggs, for ſhe will hardly or unkindly ſit on another Goole Eggs, as ſome imagine, but it is not ever certain: you ſhall in her ſtraw when you ſet her mix Nettle roots, for it is good for the Goſlings: thirty dayes is the full time that a Goole ſitteth, but if the weather be fair and warm, ſhee will hatch three or four dayes ſooner: ever when the Goole riſeth from the Neſt, you

The ordering shall give her meat, as Skeg-Oats, and Bran scalded, and give her leave to bath in the water. After she hath hatcht her Goslings, you shall keep them in the house ten or twelve dayes, and feed them with Curds, scalded Chippings, or Barly-meal in milk knodden and broken; also ground Malt is exceeding good, or any Bran that is scalded in water, milk, or tappings of drink. After they have got a little strength, you may let them go abroad with a Keeper five or six hours in a day, and let the dam at her leisure intice them in the water; then bring them in, and put them up, and thus order them, till they be able to defend themselves from vermine. After a Gosling is a month or six weeks old, you may put it up to feed for a Green-Goose, and it will be perfectly fed in another month following: and to feed them, there is no meat better than Skeg-Oats boyld, and given plenty thereof thrice a day, Morning, Noon, and Night, with good store of milk, or milk and water mixt together to drink.

Of green-geese
and their fat-
ting.

Of the Gander.

Now you shall understand, one Gander will serve well five Geese, and to have not above forty Geese in a flock is best; for to have more is both hurtful and troublesome.

Fatting of el-
der Geese.

Now for the fatting of elder Geese, which are those which are five or six months old, you shall understand, that after they have been in the stubble-fields, and during the time of Harvest got into good flesh, you shall then choose out such Geese as you would feed, and put them in several pens which are close and dark, and there feed them thrice a day with good store of Oats, or spelted Beans, and give them to drink water and Barly-meal mixt together, which must evermore stand before them; this will in three weeks feed a Goose so fat as is needful.

Of gathering
Geese-feathers.

Now lastly, for the gathering of a Gooses feathers, you shall understand, that howsoever some Writers advise you for a needles profit to pull your Geese twice a year, *March* and *August*: yet certainly it is very naught and ill; for first, by disabling the flight of the Goose, you make her subject to the cruelty of the Fox, and other ravenous beasts: and by uncloathing her in Winter you strike that cold into her body which kills her very suddenly: therefore it is best to stay till moulting time, or till you kill her, and then you may imploy all her feathers at your pleasure, either for beds, Fletchers, or Scriveners.

For the disease and infirmities in Geese, the most and worst Of the Gargil they are subject unto, is the *Gargil*, which is a mortal or deadly stopping of the head. And the ordinary and certain cure is, to take three or four cloves of Garlick, and beating them in a mortar with sweet butter, make little long balls thereof, and give two or three of them to the Goose fasting, and then shut her up for two hours after.

The Cure.

CHAP. XVII.

Of Turkies, their nature, use, increase, and breeding.

Turkies, howsoever by some Writers they are held devourers of Corn, strayers abroad, ever pulling for meat, and many such like feigned troubles, as if they were utterly unprofitable, yet it's certain, they are most delicate either in Pall, or from the Spit, and being fat, far exceeding any other house-fowl whatsoever: nay, they are kept with more ease and less coit, for they will take more pains for their food than any other bird, only they are enemies to a Garden, and from thence must ever be kept. They when they are young are very tender to bring up, both because they are of a straying nature themselves, and the Dams are so negligent, that whilst she hath one following her, she never respecteth the rest; therefore they must have a vigilant Keeper to attend them, till they can shift for themselves, and then they will flock together, and seldom be parted. Till you fat them, you need not care for food for them: They love to roost in trees, or other high places.

Now for your choice of such as you would breed on, your Of the choice Turkey-Cock would not be above two years old at most, be sure of the Turkey that he be loving to the Chickens; and for your Hen, she will lay Cock. till she be five year old and upward. Your Turkey-Cock would be a Bird large, stout, proud, and Majestical; for when he walketh dejected, he is never good Treader.

The Turkey-hen, if she be not prevented, will lay her Eggs in Of the Turkey-Hen her sitting. secret places, therefore you must watch her, and bring her to her Hen-house, and there compell her to lay. They begin to lay in March, and will sit in April and eleven Eggs, or thirteen, is the most they should cover. They hatch ever between five and twenty and thirty dayes: When they have hatcht their broods, be sure

to keep up the Chicks warm, for the least cold kills them, and feed them either with Curds or green fresh Cheese cut in small pieces. Let their drink be new milk, or milk and water: you must be careful to feed them oft; for the Turkey-Hen will not like the House-Hen call her chickens to feed them. When your Chicks have got strength, you shall feed them abroad in some close walled Grass-plat, where they cannot stray, or else ever be at charge of a Keeper. The dew is most hurtful unto them, therefore you must house them at night, and let them abroad after Sun-rise in the morning.

Of feeding
Turkies.

Now for the fating of Turkies, sodden Barly is excellent, or sodden Oats for the first fortnight, and then for another fortnight cram them in all sorts as you cram your Capon, and they will be fat beyond measure. Now for their infirmities, when they are at liberty, they are so good Physicians for themselves, that they will never trouble their Owners; but being coopt up, you must cure them as is before described for Hullen. Their Eggs are exceeding wholsome to eat, and restore nature decayed wonderfully.

CHAP. XVIII.

Of the Duck, and such Water-fowls.

THe tame Duck is an exceeding necessary fowl for the Husbandmans yard, for she asketh no charge in keeping, but liveth of corn lost, or other things of less profit. She is once in a year a very great layer of Eggs: and when she sitteth, she craves both attendance and feeding; for being restrained from seeking her food, she must be helped with a little barley, or other overchaving of corn, such as else you would give unto Swine: as for her sitting, hatching, and feeding of her Ducklings, it is in all points to be observed in such manner as you did before with the Goose, only after they are abroad they will shift better for their food than Goslings will. For the sitting of Ducks or Ducklings, you may do it in three weeks, by giving them any kind of Pulse or Grain, and good store of water.

Of Wild ducks
and their ordering.

If you will preserve Wild Ducks, you must wall in a little piece of ground, in which is some little Pond or Spring, and cover the top of it all over with a strong net. The Pond must be set with many tufts of Oziers, and have many secret holes, and creeks,

creeks, for that will make them delight and feed though imprisoned. The Wild-duck when she layeth, will steal from the Drake and hide her nests; for he else will suck the Eggs. When she hath hatcht, she is most careful to nourish them, and needeth no attendance more than meat, which would be given fresh, twice a day, as scalded Bran, Oats or Fitches. The House-hen will hatch Wild-ducks Eggs, and the meat will be much better, yet every time they go into the water, they are in danger of the Kite, because the hen cannot guard them. In the same manner as you nourish Wild-ducks, so you may nourish Teils, Widgens, Shel-drakes or green Plovers.

CHAP. XIX.

Of Swans, and their feeding.

TO speak of the breeding of Swans is needless, because they can better order themselves in that business than any man can direct them, only where they build their nests, you shall suffer them to remain undisturbed, and it will be sufficient: but for the feeding them fat for the dish, you shall feed your Cygnets in all sorts as you feed your Geese, and they will be through fat in seven or eight weeks, either coopt in the house, or else walking abroad in some private court; but if you would have them fat in shorter space, then you shall feed them in some Pond; hedg'd or pal'd in for that purpose, having a little dry ground left, where they may sit and prune themselves, and you may place two Troughs, one full of Barly and water, the other full of old dried Malt, on which they may feed at their pleasure; and thus doing they will be fat in less than four weeks; for by this means a Swan keepeth himself neat and clean, who being a much defiled Bird, liveth in dry places so uncleanly, that they cannot prosper, unless his attender be diligent to dress and trim his walk every hour.

CHAP. XX.

Of Peacocks, and Peabens, their increase, and ordering.

PEACOCKS, howsoever our old writers are pleased to deceive themselves in their praises, are birds more to delight the eye by

by looking on them, than for a particular profit; the best commodity arising from them, being the cleansing and keeping of the Yard from venomous things, as Toads, Newts, and such like, which is their daily food: whence it comes, that their flesh is very unwholsom, and used in great Banquets more from the rareness than the nourishment; for it is most certain, roast a Peacock or Peahen never so dry, then set it up, and look on it the next day, and it will be bloud-raw, as if it had not been roasted at all.

The Peahen loves to lay her Eggs abroad in bushes and hedges, where the Cock may not find them, for if he do, he will break them; therefore as soon as she begins to lay, separate her from the Cock, and house her till she have brought forth her young, and that the cronet of feathers begin to rise at their foreheads, and then turn them abroad, and the Cock will love them, but not before. A Peahen sits just thirty dayes, and in her sitting any Grain, with water, is food good enough. Before your Chickens go abroad, you shall feed them with fresh green Cheese, and Barly meal, with water; but after they go abroad the Dam will provide for them. The best time to set a Peahen is, at the beginning of the Moon, and if you set Hens-eggs amongst her eggs, she will nourish both equally: The Pea-chickens are very tender, and the least cold doth kill them, therefore you must have a care to keep them warm, and not to let them go abroad but when the Sun shineth. Now for the feeding of them, it is a Labour you may well save, for if they go in a place where there is any corn stirring, they will have part, and being meat which is seldom or never eaten, it mattereth not so much for their fatning.

CHAP. XXI.

Of the tame Pidgeon, or rough-footed.

THe tame rough-footed Pidgeon differs not much from the wild Pidgeon, onely they are somewhat bigger, and more familiar, apt to be tame; they commonly bring not forth above one pair of Pidgeons at a time, and those which are the least of body, are ever the best Breeders, they must have their rooms and boxes made clean once a week, for they delight much in neat-

ness; and if the walls be outwardly whited or painted, they love it the better, for they delight much in fair building. They will bring forth their young ones once a moneth, if they be well fed, and after they be well pair'd, they will never be divided. The Cock is a very loving and natural bird both to his Hen and the young ones, and will sit the Eggs while the Hen feedeth, as the Hen sits while he feedeth: he will also feed the young with as much painfulness as the Dam doth, and is best pleased when he is brooding them. These kind of Pidgeons you shall feed with white Pease, Tares, and good store of clean water. In the room where they lodge you shall ever have a salt Cat for them to pick on, and that which is gathered from Salt-petre is the best: also they would have good store of dry Sand, Gravel, and Pibble, to bath and cleanse themselves withall, and above all things great care taken, that no vermine, or other birds come into their boxes, especially Sterlings, and such like, which are great Egg-suckers. And thus much of the tame Pidgeon.

CHAP. XXII.

Of nourishing and fattening Hearn, Puets, Gulls, and Bitterns.

HEARNs are nourished for two causes: either for Princes sports to make trains for the entring their Hawks, or else to furnish on the table at great Feasts: the manner of bringing them up with the least charge, is to take them out of their nests before they can fly, and put them into a large high Barn, where there is many high and cross beams for them to perch on: then to have on the floor divers square boards with rings in them and between every board which would be two yards square, to lace round shallow tubs full of water; then to the boards you shall tie great gobbets of Dogs flesh cut from the bones according to the number which yon feed: and be sure to keep the house sweet, and shift the water oft, only the house must be made so, that it may rain in now and then, in which the Hearn will take much delight. But if you feed her for the dish, then you shall feed them with Livers, and the intrails of Beasts, and such like, cut in great gobbets; and this manner of feeding will also feed either Gull, Puets, or Bittern: but the Bittern is ever best to be fed by the hand, because when you have fed him, you must tye his beak together, or he will cast up his meat again.

CHAP. XXIII.

Of feeding the Partridge, Pheasant, and Quail.

THese three are the most daintiest of all birds, and for the Pheasant or Partridge, you may feed them both in one room where you may have little boxes where they may run and hide themselves in divers corners of the room: then in the midst you shall have three Wheat-sheaves, two with their ears upward, and one with the ears downward, and near unto them shallow tubs with water, that the fowl may peck Wheat out of the ears, and drink at their pleasures, and by this manner of feeding you shall have them as fat as is possible. As for your Quails, the best feeding them is in long flat shallow boxes, each box able to hold two or three dozen, the foremost side being set with round pins so thick, that the Quail do no more but put out her head; then before that open side shall stand one trough full of small chilter-wheat, another with water, and thus in one fortnight or three weeks you shall have them exceeding fat.

CHAP. XXIV.

Of Godwits, Knots, Gray-plover, or Curlews.

FOr to feed any of these fowls, which are esteemed of all other the daintiest and dearest, fine chilter-wheat, and water given them thrice a day, Morning, Noon, and Night, will do it very effectually; but if you intend to have them extraordinary and crammed fowl, then you shall take the finest drest wheat-mal, and mixing it with milk, make it into paste, and ever as you knead it sprinkle into it the grains of small chilter-wheat, till the paste be fully mixt therewith: then make little small crams thereof, and dipping them in water give to every fowl according to his bigness, and that his Gorge be well filled; do thus as oft as you shall find their Gorges empty, and in one fortnight they will be fed beyond measure; and with these crams you may feed any fowl of what kind or nature soever.

CHAP. XXV.

Of feeding Black-birds, Thrushes, Palfares, or any small Birds whatsoever.

TO feed these birds, being taken old and wild, it is good to have some of their kinds tame to mix among them, and then putting

ing them into great cages of three or four yards square, to have divers troughs placed therein, some filled with Haws, some with Hempseed, and some with water, that the tame teaching the wild to eat, and the wild finding such change and alteration of food, they will in twelve or fourteen dayes grow exceeding fat, and fit for the use of the Kitchin.

The end of the Poultry.



Of Hawks.

CHAP. I.

Of the general Cures for all Diseases and Infirmities in Hawks, whether they be short-winged Hawks, or long-winged Hawks; and first of Castings.

HAWS are divided into two kinds, that is to say, short winged Hawks, as the Goshawk and her Tercel, the Sparrow-hawk and her Masket, and such like, whose wings are shorter than their trains, and do belong to the Ostringer; and long-winged Hawks, as the Faulcon gentle and her Tercel, the Geisaulcon and Jerking, the Lanner, Merlin, Hobby, and divers others. Now forasmuch as their infirmities for the most part proceed from the indiscretion of their Governours, if they fly them out of season before they be inseamed, and have the fat, glut, and fithiness of their bodies scoured and cleansed out; I think it not amiss first to speak of Hiwks castings; which are the naturallest and gentlest purges or scourings a Hawk can take, and doth the least offend the vital parts. Therefore you shall know, that all Ostringers do esteem plumage; and the lost feathers of small birds, with some part of the skin to be the best casting a short-winged Hawk can take; and for the purging of the head, to make her tire much upon

sheeps Rumps, the fat cut away, and the bones well covered with partly. But for long-winged Hawks, the best casting is fine Flannel, cut into square pieces of an inch and half square, and all to be jagged, and so given with a little bit of meat. By these castings you shall know the soundness and unsoundness of your Hawk: for when she hath cast, you shall take up the casting, which will be like a hard round pellet, somewhat long, and press it between your fingers, and if you find nothing but clear water come from it, then it is a sign your Hawk is well and lusty; if there come from it a yellowish filthy matter, or if it stink, it is a sign of rottenness and disease; but if it be greasy or slimy on the one side, then it is a sign the Hawk is full of grease inwardly, which is not broken nor dissolved: and then you shall give her a scouring, which is a much stronger purgation; and of scouring the gentlest next casting, is to take four or five pellets of the yellow root of Selladine well cleansed from filth, being as big as great pease, and give them out of the water early in the morning when the Hawk is fasting, and it will cleanse her mightily.

If you take the pellets of Selladine, and give them out of the Oyl of Roses, or out of the Syrup of Roses, it is a most excellent scouring also, only it will for an hour or two make the Hawk somewhat sickish. If you give your Hawk a little *Aloes Cicatrine*, as much as a bean wrapt up in her meat, it is a most sovereign scouring, and doth not only avoid grease, but also killeth all sorts of Worms whatsoever.

If your Hawk by over-flying, or too soon flying, be heated and inflamed in her body, as they are much subject thereto, you shall then to cool their bodies give them stones: These stones are very fine white pebbles, lying in the Sands of gravelly Rivers, the bigness whereof you may choose according to the bigness of your Hawk, as some no bigger than a Bean, and those be for Merlins or Hobbies; some as big as two Beans, and they are for Faulcons gentle, Lanners, and such like: and some much bigger than they, which are for Gerfaulcons, or such like. And these stones, if they be full of crests and welts, they are the better, for the roughest stone is the best, so it be smooth and not greasy. And you shall understand, that stones are most proper for long-winged Hawks, and the number which you shall give at the most must

must never exceed fifteen, for seven is a good number, so is nine or eleven, according as you find the Hawks heat more or less, and these stones must ever be given out of fair water, being before very well pickt and trimm'd of all dirt and filthiness. And thus much of Hawks castings, scourings, and stones.

CHAP. II.

Of Imposthumes in Hawks.

IF your Hawk have any Imposthume rising from her, which is apparent to be seen, you shall take sweet railins, and boyl them in Wine, and then crushing them, lay them warm to the sore, and it will both ripen and heal it: only it shall be good to scour your Hawk very well inwardly, for that will abate the flux of all evil humours.

CHAP. III.

Of all sorts of sore eyes.

FOR any sore eye, there is nothing better than to take the juice of Ground-Ivy, and drop it into the Eye. But if any Web be grown before you use this medicine, then you shall take Ginger finely searft, and blow it into the eye, and it will break the Web, then use the juice of Ivy, and it will wear it away.

CHAP. IV.

Of the Pantas in Hawks.

THE Pantas is a stopping, or shortness of wind in Hawks, and the cure is to give her the scouring of Selladine, and the oyl of Roses, and then to wash her meat in the decoction of Coltsfoot, and it will help her.

CHAP. V.

Of casting the Gorge.

THIS is when a Hawk, either through meat which she cannot digest, or through surfeit in feeding, casteth up the meat which she hath eaten, which is most dangerous. And the only way to cure her, is to keep her fasting, and to feed her with a very little at once of warm bloody meat, as not above half a Sparrow at a time, and be sure never to feed her again till she have indured the first.

CHAP.

CHAP. VI.

Of all sorts of Worms, or Flyanders in Hawks.

Worms or Flyanders, which are a kind of Worms in Hawks, are either inward or outward; inward, as in the guts or intrails; or outward, as any joynt or member: if they be inward, the scouring of Aloes is excellent to kill them; but if they be outward, then you shall bath the place with the juice of the herb *Ameos* mixt with Honey.

CHAP. VII.

Of all swelling in Hawks feet, and of the pin in the foot.

For the pin in the sole of the Hawks foot, or for any swelling upon the foot, whether it be soft or hard, there is not any thing more soveraign, than to bath it in *Patch-grease* molten, and applied to, exceeding hgt, and then to fold a fine Cambrick rag dipt in the same grease about the fore.

CHAP. VIII.

Of the breaking of a Pounce.

This is a very dangerous hurt in Hawks, especially in *Ger-faulcons*; for if you break or rive her Pounce, or but coap it so short that she bleed, though it be very little, yet it will indanger her life: the cure therefore is, presently upon the hurt, with a hot Wier to sear it, till the bloud staunch, and then to drop about it pitch of Burgundy and wax mixt together, or for want thereof, a little hard Merchants wax, and that will both heal it, and make the Pounce grow.

CHAP. IX.

Of Bones broken or out of joynt.

If your Hawk have any bone broken or misplaced, you shall alter you have set it, gubbe it with the oyle of *Mandakes* and *Swallows*, mixt together, and then splent it, and in nine dayes it will be knit, and have gotten strength.

CHAP.

CHAP. X.

Of inward bruifings in Hawks.

IF your Hawk either by stooping amongst Trees, or by the Encounter of some fowl, get any inward bruife, which you shall know by the blackness or bloodiness of their mutes, you shall then anoint her meat every time you feed her with *Spetma*, *Gall*, till her mutes be clear again; and let her meat be warm and bloody.

CHAP. XI.

Of killing of Lice.

IF your Hawk be troubled with Lice, which is a general infirmity, and apparent, for you shall see them creep all over on the outside of her feathers if she stand but in the air of the fire. You shall bath her all over in warm water and pepper small beaten, but be sure that the water be not too hot, for that is dangerous, neither that it touch her eyes.

CHAP. XII.

Of the Rye in Hawks.

THIS disease of the Rye in Hawks proceedeth from two causes; the one is cold and poze in the head, the other is foul and most uncleanly feeding, the Faulconer being negligent to seek and cleanse his Hawks beak and nares, but suffering the blood and filthiness of meat to stick and cleave thereunto. For indeed the infirmity is nothing else but a stopping up of the nares: by means whereof the Hawk not being able to cast and avoid the corruption of her head, it turns to putrifaction, and in short space kills the Hawk: and this disease is a great deal more incident to short-winged Hawks than to long. The signs whereof are apparent by the stopping of the nares. The cure is to let your Hawk tyre much upon sinewy and bony meat, as the rumps of Mutton (the fat being taken away) or the pinions of the wings of fowl, either being well lapt in a good handful of Parsly, and forcing her to strain hard in the eating of the same, and with much diligence to cleanse and wash her beak clean with water, after her feeding, especially if her meat were warm and bloody.

CHAP.

CHAP. XIII.

Of the Frounce.

THe Frounce is a cankerous Ulcer in a Hawks mouth, got by over-flying, or other inflammation proceeding from the inward parts; foul and unclean food is also a great ingenderer of this disease. The signs are soreness in the Hawks mouth, which sore will be furr'd and cover'd over with white scurf, or such like filthiness; also if the Ulcer be deep and ill, the Hawk will wind and turn her head awry, making her beak stand upright; and the cure is to take Allom, and having beaten it to fine powder, mix it with strong Wine-vinegar, till it be somewhat thick, and then wash and rub the sore therewith till it be raw, and that the scurf be clean taken away. Then take the juice of *Lobum*, and the juice of *Radish*, and mixing it with Salt, anoint the sore therewith, and in few dayes it will cure it.

CHAP. XIV.

Of the Rheum.

THe Rhume is a continual running or dropping at the Hawks nares, proceeding from a general cold, or else from over-flying, and then a sudden cold taken thereupon; it stoppeth the head, and breeds much corruption therein, and the signs are the dropping before said, and a general heaviness, and sometimes a swelling of the head. The cure is, to take the juice of *Beets*, and squint it off into the Hawks nares. Then when you feed her, wash her meat in the juice of *Broomwort*, and it will quickly purge, and set her sound.

CHAP. XV.

Of the Fornicas in Hawks.

THe Fornicas in Hawks, is a hard horn growing upon the back of a Hawk, ingendred by a poysonous and cankerous Worm, which fretting the skin and tender yellow Welt between the head and the beak, occasioneth that hard horn or excretion to grow or offend the bird: the sign is the apparent sight of the horn, and the cure is, to take a little of a Bull's gall, and beating it with Aloes, anoint the Hawks beak therewith morning

an evening, and it will in very few dayes take the horn away.

CHAP. XVI.

Of the Fistula in Hawks.

THe Fistula in hawks is a cankerous, hollow Ulcer in any part of a Hawks body, as it is in mens, beasts, or any other creature: the signs are a continual mattering or running of the sore, and a thin sharp water like Lie, which as it falls from the same, will fret the sound parts as it goeth. The cure is, with a fine small wiar, little stronger than a Virginal wiar, and wrapt close about with a soft sleaved silk, and the point blunt and soft, to search the hollownes and crookednes of the ulcer, which the pliantnes of the wiar will easily do; and then having found out the bottom thereof, draw forth the wiar, and according to the bigness of the Orifice make a tent of fine lint being wet, which may likewise bend as the wiar did, and being within a very little aslong as the ulcer is deep; for to tent is the full length is ill, and will rather increase than diminish the Fistula, and therefore ever as the Fistula heals, you must take the Tent shorter and shorter. But to the purpose; when you have made your Tent fit, you shall first take strong Allom-water; and with a small Syringe squirt the sore three or four times therewith, for that will cleanse, dry, and scour every hollownes in the ulcer: then take the tent and anoint it with the juice of the herb *Robert*, *Vinegar*, and *Allom* mixt together, and it will dry up the Sore.

The Cure.

CHAP. XVII.

Of the Privy Evil in Hawks.

THe privy Evil in hawks is a secret heart-sickness, procured either by overslying, corrupt food, cold, or other disorderly keeping; but most especially for want of Stones or casting in the due season: the signs are heaviness of head and countenance, evil enduing of her meat, and fowl black mutings. The cure is, to take morning and evening a good piece of a warm sheeps heart, and steeping it either in new Asses milk, or new Goats milk, or for want of both, the new milk of a red Cow, with the same to feed your hawk, till you see her strength and lust recovered.

T

CHAP.

CHAP. XVIII.

Of wounds in Hawks.

HAwks, by the cross encounters of fowls, especially the Heron, by stooping amongst bushes, thorns, trees, and by divers such accidents, do many times catch sores, and most grievous wounds, the signs whereof are the outward appearance of the same. And the cure is, if they be long and deep, and in place that you may conveniently, first to sitch them up, and then to taint them up with a little ordinary Balsamum, and it is a present remedy. But if it be in such a place as you cannot come to sitch it up, you shall then only take a little Lint, and dip it in the juice of the herb called *Mouf-ear*, and apply it to the sore, and it will in short space heal it. But if it be in such a place as you can by no means bind any thing thereunto, you shall then only anoint or bath the place with the aforefaid juice, and it will heal and dry up the same in very short time. The juice of the green herb called with us, English Tobacco, will likewise do the same: for it hath a very speedy course in healing and cleansing, as hath been approved by divers of the best Faulconers in this Kingdom, and other nations.

CHAP. XIX.

Of the Apoplexy, or falling Evil in Hawks.

THe Apoplexy, or falling evil in hawks, is a certain Vertigo or dizziness in the brain, proceeding from the oppression of cold humours, which do for a certain space numb, and as it were mortifie the senses. The signs are a sudden turning up the hawks head, and falling from her perch without bating, but only with a general trembling over all the body, and lying so, as it were in a trance a little space, she presently recovereth, and riseth up again, but is sick and heavy many hours after. The cure therefore is, to gather the herb *Asterion* when the Moon is in the Wain, and in the sign *Virgo*, and taking the juice thereof to wash your hawks meat therein, and to feed her, and it hath been found a most soveraign medicine.

The Cure.

CHAP.

CHAP. XX.

Of the purging of Hawks.

THERE is nothing more needful to hawks than purgation, and cleansings, for they are much subject to fat and foulness of body inwardly, and their exercise being much and violent, if there be neglect, and that their Gut be not taken away, it will breed sickness and death; therefore it is the part of every skilful Faulconer, to understand how and when to purge his Hawk, which is generally ever before she be brought to flying, and the most usual season for the same is before the beginning of Autumn, for commonly knowing Gentlemen will not flye at the Partridge, till corn be from the ground; and if he prepare for the River early, he will likewise begin with that season: the best purgation then that you can give your hawk, is *Aloes Cicatrine* wrapt up in warm meat the quantity of a French-pease, and so given the hawk to eat ever the next morning after she hath flown at any train, or taken other exercise whereby she may break or dissolve the Grease within her.

CHAP. XXI.

Of the purging of Hawks.

IF your Hawk cannot mute, as it is a common infirmity which happeneth unto them, you shall take the Lean of Pork, being newly kill'd, whilst it is warm, to the quantity of two Walnuts, and lapping a little *Aloes* therein, give it the hawk to eat, and it will presently help her. There be divers good Faulconers in this case which will take the roots of Selandine, and having cleansed it and cut it into little square pieces as big as Pease, steep it in the oyl of Roses, and so make the Hawk swallow down three or four of them, and sure this is very good and wholsom, only it will make the Hawk exceeding sick for two or three hours after. Neither must the hawk be in any weak state of body when this later medicine is given her. Also, you must observe to keep your hawk at those times exceeding warm, and much on your fist, and to feed her most with warm birds, lest otherwise you clung and dry up her entrails too much, which is both dangerous and mortal.

CHAP. XXII.

The assured sign to know when a Hawk is sick.

Hawks are generally of such a stout, strong, and unyielding nature, that they will many times cover and conceal their sicknesses so long, till they be grown to that extremity, that no help of Physick or other knowledge can avail for their safety: for when the countenance or decay of stomach, which are the ordinary outward faces of infirmities, appear, then commonly is the disease past remedy. Therefore to prevent that evil, and to know sickness whilst it may be cured, you shall take your hawk, and turning up her Train, if you see that her Tuel or fundament either swelleth, or looketh red, or if her eyes or ears likewise be of a fiery complexion, it is a most infallible sign that the hawk is sick, and much out of temper.

CHAP. XXIII.

Of the Fever in Hawks.

Hawks are as much subject to fevers as any creatures whatsoever, and for the most part they proceed from overflying, or other extraordinary heats, mixt with sudden colds, given them by the negligence of unskillful keepers. And the cure is, to set her in a cool place upon a perch, wrapt about in her cloaths, and feed her oft with a little at a time of chickens' flesh steeped in water, wherein hath been soaked Cucumer-seeds. But if you find by the stopping of her ears or head, that she is offended more with cold than heat, then you shall set her in a warm place, and feed her with the bloody flesh of Pidgeons, washit either in White-wine, or in water, wherein hath been boiled either Sage, Marjoram, or Camomill.

CHAP. XXIV.

To help a Hawk that cannot digest her meat.

IF your Hawk be hard of digestion, and neither can turn it over, nor empty her pancl, which is very often seen, you shall then take the heart of a Frbg, and thrust it down into her throat, and pull it back again by a thread fastned thereunto once or twice suddenly, and it will make her cast her Gorge presently.

CHAP.

CHAP. XXV.

Of the Gout in Hawks.

HAwks, especially those which are free and strong strikers, are infinitely subject to the Gout, which is a swelling, knotting, and contracting of a Hawks feet. The cure thereof is, to take two or three drops of blood from her thigh-vein, a little above her knee, and then anoint the feet with the juice of the herb Hollihock, and let all her Peach be anointed also with tallow, and the juice of that herb mixt together. Now if this disease (as oft it hapneth) be in a hawks wing, then you shall take two or three drops of blood from the vein under her wing, and then anoint the Pinions and inside thereof with *Unguentum de Alibea*, made very warm, which you may buy of every Apothecary. The Cure.

CHAP. XXVI.

Of the Staunching of Blood.

IT is a known experience amongst the best Faulconers, that if the Gerfaulcon shall but lose two or three drops of blood it is mortal, and the hawk will dye suddenly after; which to prevent, if the blood proceed from any Pounce, which is most ordinary, then upon the instant hurt you shall take a little hard Merchants Wax, and drop it upon the sore, and it will presently stop it; if it be upon any other part of the hawks body, you shall clap thereunto a little of the soft down of a Hare, and it will immediately stanch it; without these two things a good Faulconer should never go, for they are to be used in a moment. And thus much of the Hawk, and her diseases.

Of Bees.

CHAP. I.

Of the nature, ordering, and preservation of Bees.

OF all the creatures which are behoveful for the use of man, there is nothing more necessary, wholesome, or more profitable than the Bee; nor any less troublesome, or less chargeable. To speak first of the nature of Bees, it is The nature of Bees.

a creature gentle, loving and familiar about the man, which hath the ordering of them, so he comes neat, sweet and cleanly amongst them, otherwise if he have strong and ill smelling favours about him, they are curst and malicious, and will sting spitefully, they are exceeding industrious and much given to labour, they have a kind of government amongst themselves, as it were a well ordered Common-wealth, every one obeying and following their King or Commander, whose voice (if you lay your ear to the hive) you shall distinguish from the rest, being louder and greater, and beating with a more solemn measure. They delight to live among the sweetest herbs, and flowers, that may be, especially Fennel, and Wall Gilly flowers, and therefore their best dwellings are in Gardens; and in these Gardens, or near adjoining thereunto, would be divers fruit-trees growing, chiefly Plum-trees, or Peach-trees; in which when they cast, they may knit, without taking any far flight, or wandring to find out their rest. This Garden also would be well fenced, that no Swine nor other Cattel may come therein, as well for overthrowing their Hives, as also for offending them with their ill favours. They are also very tender, and may by no means indure any cold; wherefore you must have a great respect to have their houses exceeding warm, close, and tight, both to keep out the frost and snow, as also the wet and rain; which if it once enter into the Hive, it is a present destruction.

Of the Bee-
Hive;

To speak then of the Bee-hive, you shall know there be divers opinions touching the same, according to the customes and natures of Countries; for in the champion countries, where there is very little store of woods, they make their Hives of long Rye Straw, the rous being sowed together with Bryers; and these Hives are large and deep, and even proportioned like a Sugar-loaf, and cross-barr'd within, with fat splints of Wood, both above and under the midst part. In other Champian Countries where they want Rye-straw they make them of Wheat-straw, as in the West Countries, and these hives are of a large compass, but very low and flat, which is naught, for a hive is better for his largeness, and keepeth out the rain best when it is sharpest. In the wood countries they make them of cloven hazels, wattel'd about, with broad splints of Ash, and so formed, as before I said, like a Sugar-loaf.

And

And these Hives are of all other the best, so they be large and smooth within, for the Straw-hive is subject to breed Mice, and nothing destroyeth Bees sooner than they, yet you must be governed by your ability, and such things as the Soil affords.

Now for the Wood-hive which is the best, you shall thus trim and prepare it for your Bees: you shall first make a stiff mortar of Lime and Cow-dung mixed together; and then having cross barred the Hive within, daub the out-side of the Hive with the mortar at least three inches thick, down close unto the stone; so that the least Air may not come-in: then take a Rye-sheaf, or Wheat-sheaf or two that is baled, and not thrashed, and chusing out the longest straws, bind the years together in one lump, put it over the Hive, and so as it were thatch it all over, and fix it close to the Hive with an old hoop, and this will keep the hive inwardly as warm as may be; also, before you lodge any Bee in your hive, *you shall perfume it with Juniper, and rub it all within with Fennel, Hyssip, and Time-flowers, and also the Stone upon which the Hive shall stand.*

Of the trimming of the Hive.

Now for the placing of your hive, you shall take three long thick stakes, cut smooth and plain upon the heads, and drive them into the earth triangular-wise, so that they may be about two foot above the ground: then lay over them a broad smooth paving stone, which may extend every way over the stakes above half a foot: and upon the stone set your hive, being less in compass than the stone by more than six inches every way; and see the door of your hive stand directly upon the rising of the morning Sun, inclining a little unto the Southward: and be sure to have your Hives well sheltered from the North-winds, and generally from all tempestuous weather: for which purpose if you have Sheads to draw over them in the winter, it is so much the better. And you shall place your Hives in orderly rows one before another, keeping clean allies between them every way, so as you may walk and view each by it self severally.

The placing of Hives.

Now for the casting of your Bees, it is earlier or later in the year, according to the strength and goodness of the Stock, or the warmth of the weather. The usual time for casting, is from the beginning of May till the middle of July; and in all that time you must have a vigilant eye, or else some servant to watch their rising, lest they fly away, and knit in some obscure place far from

from your knowledge: yet if you please, you may know which Hives are ready to cast a night before they do cast, by laying your ear after the Sun-set to the Hive, and if you hear the Master-Bee above all the rest, in a higher and more solemn note, or if you see them lye forth upon the stone, and cannot get into the hive, then be sure, that the stock will cast within few hours after.

As soon as you can perceive the Swarm to rise, and are got up into the air, (which will commonly be in the height and heat of the Sun) you shall take a Brass Basin, Pan, or Candlestick, and make a tinkling noise thereupon, for they are so delighted with Musick, that by the sound thereof they will presently knit upon some branch or bow of a Tree. Then when they are all upon one cluster, you shall take a new sweet Hive well drest, and rubb'd with Honey and Fenne!, and shake them all into the hive; then having spread a fair sheet upon the ground, set the hive thereon, and cover all clean over close with the sheet, and so let it stand till after Sun-set; at which time the Bees being gathered up to the top of the hive (as their nature is) you shall let them upon the stone having rubb'd it with Fennel; and then daub it close round about with lime and dung mixt together, and only leave them a door or two to issue out and in at. There be some stocks which will cast twice or thrice, and four times in a year; but it is not good, for it will weaken the stock too much; therefore to keep your stocks in strength and goodness, it is not good to suffer any to cast above twice at the most.

Again, you shall with pieces of Brick, or other smooth stones, raise the stock in the night, three or four inches above the stone, and then daub it close again, and the Bees finding house-room, will fall to work within, and not cast at all; and then will their stocks be worth two others. And in the same manner, if you had the year before any small swarms, which are likely to cast this year, or if you have any early swarms this year, which are likely to cast at the later end of the year: both which are often found to be the destruction of the stocks: in either of these cases you shall enlarge the hive, as it is before said, by raising it up from the stone, and it will not only keep them from casting, but make the stock better, and of much more profit: for that hive which is of the most weight, is of the best price.

Now

Now when you have markt out those old Stocks, which you intend to sell (*for the oldest is fittest for that purpose*) you shall know, that the best time to take them is at *Michaelmas*, before any Frosts hinder their labour: and you shall take them ever from the stone in the dark of the night when the air is cold, and either drown them in water, or smother them with fusbals, for to chase them from their Hives, as some do, is naught, because all such Bees as are thus frightened from their Hives, do turn Robbers, and spoil other Stocks, because that time of the year will not suffer them to labour, and get their own livings.

Now if you have any weak Swarms, which coming late in the year cannot gather sufficient of Winter-provision; in this case you shall feed such stocks by daily smearing the stone before the place of their going in and out, with Honey and Rose-water mixt together, and so you shall continue to do all the strength of Winter, till the warmth of the Spring, and the Sun-shine bring forth store of flowers for them to labour on. You shall continually look that no Mice, and such like vermine breed about the Hives, for they are poysonous, and will make Bees forsake their Hives.

Now lastly, if any of your stocks happen to dye in the Winter, (as amongst many some must quail) you shall not by any means stir the stock, but let it remain till the Spring, that when you see your Bees begin to grow busie, then take up the dead stock, and trim it clean from all filth, but by no means stir or crush any of the Combs; then dash the Combs, and besprinkle them, and besmear all the inside of the Hive with honey, Rose-water, and the juice of Fennel mixt together, and daub also the stone therewith. Also then set down the Hive again, and daub it as if it had never been stirred, and be well assured, that the first Swarm which shall rise, either of your own, or of any neighbours of yours within the compass of a mile, it will knit in no place but within that Hive, and such a stock will be worth five others, because they find half their work finished at their first entrance into the Hive; and this hath been many times approved by those of the most approved experience. And thus much touching the Bee and his Nature.

A Platform for Ponds, which the Printer hath added to this ensuing discourse, for the better satisfaction and delight of such as having a convenient Plat of ground for the same purpose shall be desirous to make any Ponds for the increase and store of Fish.

G. The Gate.

D. The Ditch and Quickset Hedge.

W. The Walks.

B. The Bridge.

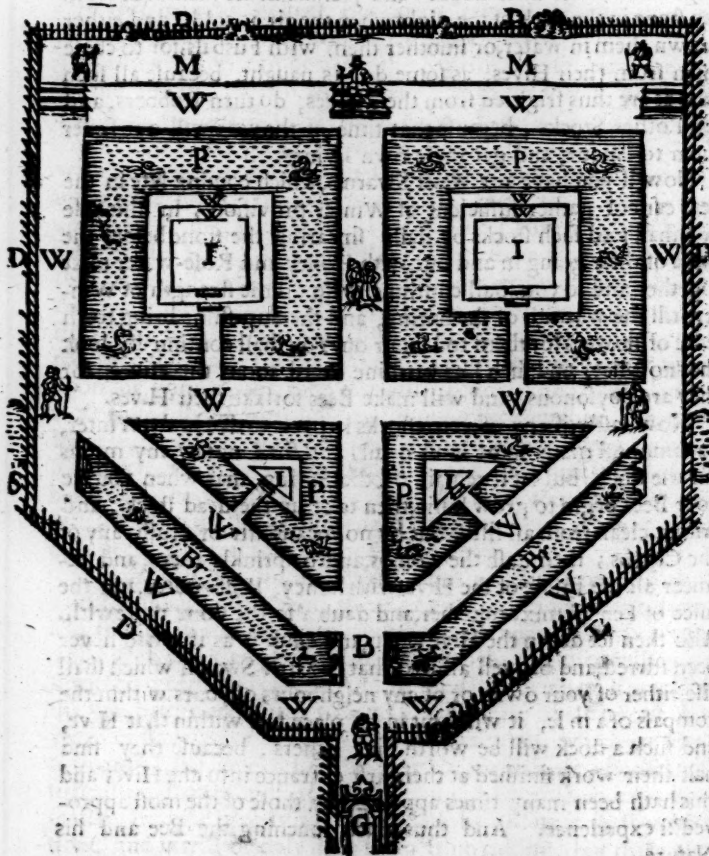
Br. The Brook.

P. The Ponds.

I. The Ensilles.

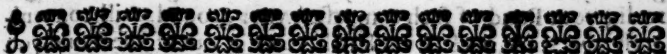
M. The Mount.

S. The Spring.



The Walls about the Ponds may be planted with Fruit, Trees, or Willows.

of



Of Fishing.

CHAP. I.

Of Fishing in general; and first of the making of the Fish-Pond.

FOrasmuch as great Rivers do generally belong either to the King, or the particular Lords of several Mannors, and that it is only the Fish-pond which belongeth to private persons, I will as a thing most belonging to the general profit, here treat of Fish-ponds. And first touching the making of them, you shall understand, that the Grounds most fit to be cast into Fish-ponds, are those which are either marishy, boggy, or full of Springs, and indeed most unfit either for grazing, or any other use of better profit. And of these grounds, that which is full of clear Springs will yield the best water; that which is marishy will feed Fish, and that which is boggy will defend the Fish from being stolne.

Having then such a piece of wast Ground, and being determined to cast it into a Fish-pond, you shall first by small trenches draw all the springs or moist veins into one place, and so drain the rest of the Ground, and then having markt out that part which you mean to make the head of your pond, which although it be the lowest part in the true level of the Ground, yet you shall make it the highest in the eye; you shall first cut the trench of your flood-gate, so as the water may have a swift fall, when you mean at any time to let it out; and then on each side of the trench drive in great stakes of six foot in length, and six inches square of Oak, Ash, or Elm, but Elm is the best, and these you must drive in rows within four foot one of another, at least four foot into the earth, as broad and as far off each side the Flood-

gate as you intend the head of your Pond shall go; then begin to dig your Pond of such compass as your ground will conveniently give leave, and all the Earth you dig out of the Pond you shall carry and through amongst the stakes, and with strong rammers ram the Earth hard between them, till you have covered all the stakes; then drive in as many more new stakes besides the heads of the first, and then ramme more Earth over and above them also: and thus do with stakes above stakes till you have brought the head-sides to such a convenient height as is fitting. And in all this work have a special care that you make the inside of your banks so smooth, even, and strong, that no current of the water may wear the Earth from the stakes.

You shall dig your Fish-pond not above eight foot deep, and so as it may carry not above six foot water.

You shall pave all the bottom and banks of the Pond with large sods of Flot-grass, which naturally grows under water, for it is a great feeder of fish: and you shall lay them very close together, and pin them down fast with small stakes and windings. You shall upon one side of the Pond, in the bottom, stake fast divers Ravens or Faggots of Brush-wood, wherein your Fish shall cast their Spawn, for that will defend it from destruction; and at another place you shall lay Sods upon Sods, with the grass sides together, in the bottom of the Pond, for that will nourish and breed Eels: and if you stick sharp stakes likewise by every side of the Pond, that will keep Theeves from robbing them. When you have thus made your Ponds, and have let in the water, you shall then store them; Carp, Bream, and Tench, by themselves; and Pike, Perch, Eel, and Tench by themselves: for the Tench being the Fishes Physician is seldom devoured: also in all Ponds you shall put good store of Roch, Dace, Loch, and Meneu; for they are both food for the greater Fishes, and also not uncomely in any good mans Dish.

You shall also to every Melter put three Spawners, and some put five, and in three years the increase will be great, but in five hardly to be destroyed. And thus much for Ponds, and their storings.

CHAP.

CHAP. II.

Of the taking of all sorts of Fish, with Nets, or otherwise.

IF you will take Fish with little or no trouble, you shall take of *Sal Armoniack* a quarter of an ounce; of young *Chives*, and as much of a *Calves Kell*, and beat them in a mortar untill it be all one substance, and then make Pellets thereof, and cast them into any corner of the Pond, and it will draw thither all the Carp, Bream, Cheven, or Barbel, that are within the water; then cast your Shove-net beyond them, and you shall take choice at your pleasure. If you will take Roch, Dace, or any small kind of fish, take Wine-lees, and mix it with Oyl, and hang it in a Chimney-corner till it be dry or look black; and then putting it into the water, they will come so abundantly to it, that you may take them with your hand. If you will take Trout, or Graitling, take two pound of Wheat-bran, half so much of white Pease, and mixing them with strong brine, beat it till it come to a perfect Past: then put pellets thereof into any corner of the water, and they will resort thither, so as you may cast your Net about them at your pleasure. But if you will take either Pearch or Pike, you shall take some of a Beasts Liver, black Snails, yellow Butterflies, Hogs blood, and *Opoponax*, beat them altogether, and having made a Past thereof, put it into the water, and be assured that as many as are within forty paces thereof will presently come thither, and you may take them at your pleasure.

Lastly, if you take either two drams of Cock-stones or twice so much of the Kernels of Pine-apple tree burnt, and beat them well together, and make round balls thereof, and put it into the water, either fresh or salt, any Salmon or great Fish will presently resort thither; you may take them either with Net, or otherwise.

Also it is a most approved Experiment, That if you take bottles made of Hay, and green Oziers, or Willow mixt together, and sink them down in the mid^dst of your Pond, or by the bank-sides, and so let them rest two or three dayes, having a Cord so fastned unto them, that you may twitch them up on Land at your pleasure: believe it, all the good Eels which are in the

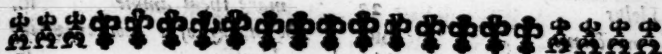
the Pond will come unto those bottles, and you shall take them most abundantly: and if you please to bait those Bottles by binding up Sheeps-guts, or other garbage of Beasts within them, the Eels will come sooner, and you may draw them oftner, and with better assurance. There be other wayes besides those to take Eels as with Weels, with the Eel-spear, or with bobbing for them with great Worms; but they are so generally known and practised, and so much inferiour to this already shewed, that I hold it a needless and vain labour to trouble your ears with the repetitions of the same; and the rather, sith in this work I have laboured only to declare the secrets of every knowledge, and not to run into any large circumstance of those things which are most common and familiar to all men. And thus much of Fish and Fish-ponds, and their general knowledge. Now as touching the Angle, and the Secrets thereto belonging, you shall find it at large handled in the next Book, called *Country Contentments*.

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The Table of the First Book.

Of Beasts.

Of the Horse.

O F the Horse in general	p.1	His first Backing	ib.
Nature of Horses	2	Three main points of a Horse- man's skill	12
Choice of Horses, and their shapes	ib.	Of helps, and what they be	ib.
Colours of Horses	ib.	Of corrections, and which they be	ib.
Horses for a Princes seat	3	Of cherishings	13
Horses for travel	ib.	Of the Muscles and Martingale	ib.
Hunting horses	ib.	Of treading the large rings	14
Running horses	ib.	Choice of grounds	ib.
Coach Horses	4	Of galloping large rings	15
Pack Horses	ib.	Helps in the large ring-turns	16
Cart Horses	ib.	Corrections in the ring-turns	ib.
Of Mares	ib.	Cherishing in the ring-turns	17
Ordering horses for service	5	Of stopping and going back	ib.
Ordering horses for a Princes seat	ibid.	Helps	18
Ordering of travelling horses	ib.	Corrections	ib.
Ordering of Hunting horses	6	Cherishings	ib.
Ordering of Running horses	ib.	Of advancing before	19
Ordering of Coach horses	7	Helps	ib.
Ordering of the Pack, or Cart- horse	ib.	Corrections	ib.
The preservation of horses	ib.	Cherishings	20
Of riding in general	8	The use of advancing	ib.
Imperfect use of this recreation	ib.	Of jerking behind	ib.
The pleasure of riding	ib.	Helps	21
The Authors Apology	9	Corrections	ib.
The taming of a young Colt	ib.	Cherishings	ib.
Of saddling and bridling	10	Of turning	ib.
		Helps	

The Table.

Helps	23	make them amble	ib.
Corrections	ibid.	The marks of a good traveling Horse	ib.
Chirishings	ibid.	To make a Horse amble	ib.
Of the Turning-Post	24	Divers ways of Ambling	37
Of managing	25	Of traveling	ib.
Diversities of manages	26	Of wiping	ib.
Of the Career	ib.	Helps in Ambling	ib.
Horses for pleasure	27	The ordering and dieting of the Hunting-Horse	38
Of bounding aloft	ib.	Taking up the Hunting-horse	ib.
Of the Corvet	ib.	Cloathing the Hunting-horse	ib.
Of the Gallip Galliard	28	Dressing the Hunting-horse	39
Of the Capriole	29	Of watering and feeding the Hunting-horse	40
Of going aside	ib.	The exercise of the Horse	42
Of riding before a Prince	30	The scouring of the Horse	ib.
Of the Caragolo	ib.	Ordering of a Horse after exercise	ibid.
To ride for Recreation	31	Of ordering, dieting, taking up, cloathing, dressing, watering, and feeding the Running Horse	42
Of breeding of all sorts of Horses fit for the Husbandmans use	ibid.	Of his exercise by airing and coursing	45
Grounds to breed on	32	Of Sweats	ib.
Division of Grounds	33	Of scouring him	ib.
Choice of the Stallion	ib.	Ordering after exercise	ib.
Choice of Mares	ib.	General Rules for a Running Horse	46
When to put them together	ib.	General Rules for a Traveling Horse	47
Of covering Mares	ib.	How to cure all inward sicknesses	48
To know if a Mare hold	34	Of the Head-ach, Frenzie, or Staggers	ibid.
To conceive Male-Foals	ib.	Of the sleeping Evil	49
To provoke Lust	ib.	Of the falling Evil	Planer
To keep Mares from barrenness	ib.		struck
Ordering Mares after covering	ib.		
A help for Mares in Foaling	35		
Ordering Mares after Foaling	ib.		
Weaning of Foals	ib.		
Ordering after Weaning	ib.		
Gelding of Colts	36		
Of Horses for travel, and how to			

The Table.

Struck Night-mare, or palsey.	ib.	shedding of seed	56
Of the generall cramp, or convulsion of sinewes	50	Of the particular diseases of Mares, as barrenness, consumption, rage of love, casting, foals, hardnesse to foal, and to make a Mare cast her foal	ib.
Of any cold or cough, wet or dry, or for any consumption or putrification of the Lungs what soever	ib.	Of drinking venome, &c.	57
Of the running Glaunders, or mourning of the chins	ib.	Of suppositories, Clusters, and purgation	ib.
Of hide-bound, or consumption of the flesh	51	Of Neefings and Frictions	58
Of the breast pain, or any sickness of the heart	ib.	Of all the diseases in the eyes	ib.
Of tyred horses	ib.	Of the Imposthume in the ear, Polk-evil, Fistula swelling after blood-letting, any gald-back, Canker, fit-fast, Wenns, Navil-gall, &c.	ib.
Of diseases of the stomach, as surfeits, loathing of meate, or drink	52	Of the Vives	59
Foundring in the body	ib.	Of the Strangle, Bite, Botch or Imposthume	ib.
The Hungry evil	ib.	Of the Canker in the Nose, or any other part	ib.
Diseases in the Liver, &c.	53	Of stanching blood in any part	ib.
Of the Yellowes and diseases of the Gall	ib.	Of the diseases in the mouth, as bloody rifts, Figs, Lampas, Camery, Inflammation, tongue hurt, or the Barbs	60
Of the sickness of the Spleen	ib.	Of pain in the teeth, or loose teeth	ib.
Of the Dropfie, or evil habit of the body	54	Of the crick in the neck	ib.
Of the Chollick, Belly-ake, or Belly bound	ib.	Of the falling of the Crest, mange in the main, or shedding of hair	61
Of the Lax or Bloody-Flux	ib.	Of pain in the withers	ib.
Of the falling of the Fundament	55	Of swaying the back, or weakness in the back	ib.
Of Bots and Worms of all sorts	ib.	Of the itch in the sayle, scab, manginess, farcy	ib.
Of pain in the Kidneys, pain to piss, and Stone	ib.		X
Of the Strangullion	ib.		
Of pissing blood	ib.		
Of the Colt-evil, mattering of the yard, falling of the yard,			

The Table.

Of any halting whatsoever, &c.	61	pricking, fig, reitrait, or chaying	66
Of foundring in the Feet	62	To draw out a stub or thorn	ib.
Of the splent, curb, bone-spaven, or any knob or bony excreffion or ring-bone	63	Of any Ambury or Tetter.	ib.
Of the Mallander, Sellander, Paines, Scratches, Mallat, Mules, Crown-scab, &c.	ib.	Of the cords or string-halt	ib.
Of any upper attain or neather, or any over-reaching	ib.	Of spur-galling, &c.	67
Of all the infirmities of, in, or ab in the hoofs, &c.	ibid.	To heal any sore or wound	ib.
Of the blood-spaven, bough, bony or any other unnatural swell- ing	ibid.	Of fnew's cut	ibid.
Of Wind-gals.	ibid.	Of eating away dead flesh	ib.
Of enterfeuring, Shackle-gall, &c.	ibid.	Of knots in joynts	ib.
Hurts on the Crones, as Quik- ter-bone or Matlong	ib.	Of venomous wounds, &c.	ib.
Of wounds in the foot, graveling		Of Lice or Nits	ib.
		To defend a horse from flies	68
		Of bones broken, or out of joynt	ib.
		Of drying or skinning sores when they are almost whole	ib.
		A most famous Receipt to make a horse that is lean, & that is full of inward sickness, sound and fat, in fourteen dayes	ib.
		To make a white star	69

Of the Bull, Calf, Cow, or Oxe.

Of the Bull, Cow, Calf, or Oxe, &c.	69	To preserve Cattel in health	ib.
The Countries for breed	70	Of the Feaver in Cattel	73
Of not mixing, and mixing breeds	ib.	Of any inward sickness	ib.
The shape of the Bull	ib.	Of the diseases in the head, as the sturdy, &c.	ib.
The use of the Bull	ib.	Of all the diseases in the eyes of Cattel, &c.	ibid.
The shape of the Cow	ib.	Of diseases in the Mouth, as Barbs, Bleans, &c.	74
The use of the Cow	71	Of diseases in the Neck, as be- ing galled, bruised, swollen, lost &c.	75
Of Calves, and their nourishing	ibid.	Of the Pestilence, Gargill or Murrain	ib.
Observations for Calves	ib.		Of
Of the Oxe and his use	ib.		
Of the Oxes food for labour	72		
Oxen to feed for the Butcher	ib.		

The Table.

Of milking, or leanness	76	foal, &c.	ib.
Of diseases in the Guts, as flux, costiveness	ib.	Of all kind of bruising	80
Of pissing blood	ib.	Of swallowing beans-dung, or any poyson	ib.
Of dropping nostrils, or any cold	ib.	Of killing Lice or Tick	ib.
Of all manner of swellings	77	Of the dew-bowle	ib.
Of the Worm in the tayl	ib.	Of the losse of the Cud	81
Of any Cough or shortnesse of breath	ib.	Of the killing of all sorts of worms	ib.
Of any Imposthume, Bile or Botch	ib.	Vomiting blood	ib.
Of diseases in the sinews, as weakness, stiffnesse or soreness	ib.	Of the Gout	ib.
Of the generall scab, particular scab or scurf	78	Of the milking	ib.
Of the hide-bound, or dry skin	ib.	Of provoking a Beast to rise	82
Of diseases in the lungs, as lung-grown, &c.	ib.	Of the over-flowing of the galib.	ib.
Of the biting with a mad dog, or other venomous beasts	79	Of a Beast that is goared	ib.
Of the falling down of the palate	ib.	Of the Cow that is methered	ib.
Of any pain in the hoof as the		Of drawing out of thorns, or stubs	ib.
		Of purging Cattel	ib.
		Of being shrew-run	83
		Of faintnesse	ib.
		Of breeding milk in a Cow	ib.
		Of bones out of joynt or broken	ib.
		Of the rot in Beasts	ib.
		Of the Pantar	84
		Of all manner of wounds	ib.

Of the Sheep.

OF Sheep, their use, choice, shape and preservation	85	and an unsound	88
Of the staple of wooll	ib.	Of sicknesse in Sheep, as the fever, &c.	ib.
Of the Lear of sheep	ib.	Of the generall Scab	ib.
The shape of Sheep	86	Of killing Maggots	89
When Ewes shuld bring forth	ib.	Of the Red-water	ib.
Ordering of Lambs	ib.	Of Lung-sick, or any Cough, or Cold	ib.
Needfull Observations	87	Of the worm in the claw, or in the foot	ib.
The preservation of Sheep	ib.		
The signs to know a sound sheep,			

The Table.

any other part	ib.	Of making an Ewe love betwixt	
Of wild fire	ib.	Lamb, or any other Ewes	
Of the diseases of the gall, as		Lamb	ib.
Choller, Jaundice, &c.	90	Of licking up poyson	ib.
Of the tough flegm, or stoppings		Of Lambs, yearend sick	93
	ib.	Of making an Ewe to be easily	
Of the bones broken, or out of		delivered	ib.
joynt	ib.	Of Teeth lose	ib.
Of any sickness in Lambs	ib.	Of increasing milk	ib.
Of the sturdy turning-evil, or		Of the Staggers, or leaf-sickness	
more-sound	91		ib.
Of all diseases in the eyes in ge-		Of all sorts of Worms	ib.
neral	ib.	Of the losse of the end	94
Of water in a Sheeps belly	ib.	Of saving sheep from the rot	
Of the rag'd or belk Sheep	ib.		ib.
Of the Pox in Sheep	92	A few Precepts for the Shepherd	
Of the Wood-evil or cramp	ib.		ib.

Of Goats.

O F Goats and their natures		Of stopping the Teats	98
The shape of Goats	96	Of Goats that cannot kid	ib.
The ordering of Goats	ib.	Of the Tetter, or dry Scab	ib.
Of any inward sickness, as the		Of gelding Kids	ib.
Pestilence, &c.	97	Of the Itch in Goats	99
Of the Dropsie	ib.	Of the Tuell stopping	ib.
		Of the Staggers	ib.

Of Swine.

O F all manner of Swine	99	Catarrhe	ibid.
The nature of Swine	ib.	Of the Gall in Swine	ib.
Of the choise & shape of Swine		Of the Meazels	103
	ib.	Of the Impossibilities in any por-	
Of the use and profit of Swine			ibid.
	101	Of Vomiting	ib.
Of the Fever, or any hidden		Of leanness, mistike, fowes	ib.
sickness in Swine	102	marginale	ib.
Of Murrain, Pestilence, or			ib.

The Table.

Of the sleeping Evil	104	Of feeding Swine either for Ba-	
Of pain in the Milt	ib.	con. or Lard	ib.
Unnaturalness in Swine	ib.	Of feeding Swine in Wood-	
Of the Laxe or Flux	ibid.	Countries	106
Of the Lugging of Swine with		Of feeding at the Reek	ib.
Dogs	106	Of feeding Swine in or about	
Of the Pox in Swine	ib.	great Cities	ibid.
Of killing Maggots in any part		Of feeding Hogs for Lard, or	
ibid.		Bones for Brann	ib.

Of Conies

OF tame Conies in generall	Conies.	109
108	Of the feeding and preservation	
The nature of the Cony	of Conies	ib.
Of boxes for tame Conies.	Of the rot amongst Conies	110
Of the choice and profit of rich	Of madness in Conies	ib.

The Table of the Second Book

Of Poultry.

OF the Dunghill Cock, Hen,	Of the Capon, and when to carve	
Chicken, and Capon,	him	115
112.	Of the Capon to lead Chickens	
Of the Dunghill Cock		ib.
Of the choice and shape of the	Of feeding and cramming Ca-	
Cock,	pons	ib.
Of the Hen, her choice & shape	Of the Pip in Poultry	116
ibid.	Of the raup	ib.
Of sitting Hens.	Of the Flux	ib.
Of the choice of Eggs	Of stopping in the Belly	ib.
Of Chickens	Of lice in Poultry	ib.
Of feeding and cramming Chick-	Of stinging with venomous	
ens	Worms.	117
Of preserving eggs	Of all sore Eyes	ib.
Of gathering Eggs	Of Hens which are	ib.
115		Of

The Table.

Of Hens which eat their Eggs	ib.	Of making Hens lean	118
Of keeping a Hen from sitting	ib.	Of the Crow-waddens	ib.
Of making Hens lay soon and of	ib.	Of the Hen-house scituation	ibid.

Of Geese.

Of the Goose in general	119	ting	ib.
Of the choice of Geese	ib.	Of Ganders	ib.
Of laying eggs, and sitting	ib.	Of fattening of elder Geese	ib.
Of the ordering of Goslings	120	Of gathering of Geese feathers	ib.
Of green Geese, and their fat-	ib.	Of the gargil in Geese	ib.

Of Turkeys.

Of Turkeys in general	121	Of the Turkey-Hen, and her sit-	ib.
Of the choice of the Tur-	ib.	ting	ib.
key-Cock	ib.	Of the feeding of Turkeys	122

Of Water-fowl, and others.

Of the tame Duck	122	Of nourishing & fattening Hens,	ib.
Of Wild Ducks, and their	ib.	Puets, Gulls, and Bitterns	125
ordering	ib.	Of feeding Partridge, Pheasant,	126
Of Swans, and their feeding	123	and Quail	ib.
Of Pea-Cocks and Pea-Hens	ibid.	Of Godwits, Knots, Gray Plo-	ib.
Of the tame Pigeon, or rough-	124	ver or Curlew	ib.
footed	ib.	Of black Hens, Thrushes, Fel-	ibid.
		fares	ib.

Of Hawks.

Of Hawks in general of all	127	Imposthumes in Hawks	129
kinds	ib.	Of sore Eyes in Hawks	ib.
Of scowring	ib.		ib.

The Table.

18	Of the Pantas	ib.	Of the privy-evil	133
ib.	Of casting the Gorge	ib.	Of all sorts of wounds	134
tion	Of all sorts of Worms or Pilsan-		Of the Apoplexy, or falling e-	
id.	ders	130	vil	ib.
	Of all swelling in Hawks feet	ib.	Of the purging of Hawks	135
	Of the breaking of a Rounce	ib.	Of a Hawk that cannot mute.	
	Of bones broke or out of joynt	ib.		ib.
	Of all inward bruising	131	The assuredst signs to know when	
ib.	Of killing Lice	ib.	a Hawk is sick	139
ib.	Of the Ric	ib.	Of the Feaver in Hawks	ib.
ib.	Of the Frounce	132	Of helping a Hawk that cannot	
bers	Of the Rhums	ib.	digest	ib.
ib.	Of the Fornicac	ib.	Of the Gout in Hawks	137
ib.	Of the Fistula	133	Of the stanching of blood	ib.

Of Bees.

170	OF Bees in general	138	dering the swarms	ib.
171	Of the nature of Bees	ib.	Of setting bives	140
172	Of the Bee-bive	ib.	Of the preservation of weak	
	Of the trimming of the hive	139	stocks	ib.
	Of the placing of bives	ib.	An excellent Secret concerning	
	Of the casting of Bees, and cr-		Bees	141

Of Fishing.

125	A Platform for Fish-ponds,		Of the taking of all sorts of	
126		142	Fish with Nets, or other-	
127	Of Fishing in general	143	wise	144

FINIS

THE

The Division of the Titles treated of in these Books.

- F**irst, Of the *Horse*, his Nature, Diseases, and Cures ; with the whole Art of riding, and ordering all sorts of *Horses*, from fol. 1. to 70.
2. Of the *Bull, Cow, Calf, or Oxe*, their breeding, feeding, and curing, from fol. 70. to 83.
 3. Of *Sheep*, their choice, use, shape, infirmities and preservation, from fol. 83. to 96.
 4. Of *Goats*, their nature, shape, ordering and curing, from fol. 96. to 100.
 5. Of *Swine*, their choice, breeding, curing, and feeding, in either *Champion*, or *Wood Countries*, from fol. 100. to 107.
 6. Of tame *Conies*, from fol. 107. to 111.
 7. Of *Poultry*, their ordering, fatting, cramming, and curing all the diseases to them incident, from fol. 111 to 128.
 8. Of *Hawks*, either short-winged, or long-winged ; the general Cures for their diseases and infirmities, from fol. 128. to 138.
 9. Of *Bees*, their ordering, profit, and preservation, from fol. 138. to 142.
 10. Of *Fishing*, and making *Fish-Ponds*, from fol. 142. to the end.

Country Contentments.
OR, THE
HUSBANDMANS
Recreations.

CONTAINING
The Wholesome Experience, in which
any ought to Recreate himself, after the toyl
of more Serious Business.

As namely,

Hunting, Hawking, Coursing with
Grey-Hounds, and the Laws of Leash, Shooting in
the Long-Bow or Cross-Bow, Bowling, Ten-
nis, Baloon; The whole Art of Angling;
And the use of the Fighting Cock.

By *G. Markham.*

The Eleventh Edition.

Newly Corrected, Enlarged, and adorned with ma-
ny Excellent Additions, as may appear by this Mark

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Country, Country, Country

ON THE

Recreation

CONTAINING

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any ought to Recreate himself after the end
of many serious labours.

A Poem.

Hunting, Hawking, Counting, with
Golfing, and the Laws of the Game
the Laws of the Game of Bowls, &c.
the Laws of the Game of Tennis, &c.
And the Laws of the Game of Chess.

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LONDON.

Printed for George Routledge, at the sign of the Green
Lancaster-Row, 1837.

To the thrice Noble and Vertuous

maintainer and furtherer of all lawful and
worthy pleasures, Sir THEODORE
NEWTON, Knight.

SIR, Howsoever banished by the necessity of mine Affairs,
from your presence, (in which I once built the best and
happiest estate of my Life, beginning to love it, because I found
you did employ it,) yet can I never be separated from your re-
membrance, because it is all the joy which is likely to live and
dye with me; witness my soul, that shews me no wordly lesson
so much, as the beneficial favours I have reapt from your ver-
tue; which to acknowledge with a more earnest and serious
fervency, I have sent this poor Book to kiss your hand, and
speak to you in plain and short Rules those speeches which you
have been willing to hear from my mouth; not doubting but
they will give you satisfaction, and make me live both with you,
and the inheritors of your virtues, to the last age. They are
true and easie, drawn from the so last times, not borrowed to be-
flow with a flattering insinuation, but faithfully drawn from
Art, and from those Experiments which I once thought should
have slept in the grave with me: but having lived so long from
your eyes (which, I protest, my soul truly loves) I studied to
think what grateful Ambassador I might send to speak I love
you, I love you, and finding none which I thought you would bet-
ter hear than this, I furnished him with the best instructions I
could, and sent him only attired in his own virtue, to tell you
what I do, and what I will do, is ever to live and dye at your ser-
vice,

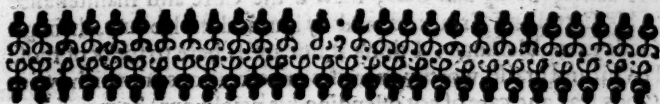
Gervase Markham

To the best disposed Readers.

MAny and sundry may be the constructions and censures of this Book (Courteous and well disposed Reader) because I have in former time written so largely of some part of the subject contained herein; but I would have no man mistaken in his own prejudicate opinion, but truly understand, that this is neither Epitome, Relation, Extraction, nor Repetition either of mine own, or any other Author whatsoever; but a plain form of doing things by a nearer and more easie and safer way then ever hath hitherto been discovered, drawn from the latest experiments in true art, and finding a nearer way to our ends by many degrees: for what before could not be done in divers years, here you shall see how to effect in few moneths; and what we bestowed moneths upon to seek, now we may find in few weeks. The Reasons which induc'd me to this labour were these: First to give satisfaction to the friends and favourers of my former Works, that when they hear men discourse of these passages to our delights, they may yet know, that the first was neither ill nor vain; but what now is derived from it; and that albeit we may be less curious, yet the curiosity is not altogether unprofitable, but both joyned together may make an absolute understanding. Then to give ease and a light burthen to the heavy and duller Memory, whom the tediousness of a great work may discourage: And lastly, because my former labour is utterly out of Print, whereby the Kingdome is deprived of the benefit I intended; I thought good to have something living of less price, and as great (perhaps greater) profit, which should satisfie all vertuous minds in any thing required, within the compass of those former shew Recreations: not doubting but howsoever men may first give a light survey to these papers: yet if they once take pains to read them, they will after affirm them worthy of choice becomers. And with this settled resolution I leave them to thy view, and their thine own rest.

Ever one, Gervase Markham.

Comit



COUNTRY CONTENTMENTS.

O R,

The *Husbandmans* Recreation,

CONTAINING

The wholesome Exercises, in which any man ought
to Recreate himself, after the toyl of more
Serious Business.

The First Book.

CHAP. I.

*Of Hunting, and of all the particular Know-
ledges belonging thereunto.*

HAVING already in my former Work of the *English Husbandman*, set forth in sufficient largeness, the toyl and industrious labours of the careful *Husbandman*, and how both his Mind and Body ought in every season to be employ'd for the effecting and bringing forth of those wholesome profits, which God hath appointed for the maintenance of him and his Family: And in the Book last going be-
fore

fore called, *Cheap and Good*, shew'd the Cure and maintenance of his Cattel and Creatures bred by him and his labours, through Gods great Blessings; I think it not amiss here to speak of those lawful and praise-worthy exercises or recreations, in which (with Gods fear, and care of not offending his neighbour) he may soberly spend those hours which he shall bestow in the cheerful reviving and stirring up of his spirits, being formerly wearied or fore-done with the heavy toyl of more unpleasant (though more profitable) Studies: both because it is intended that a man so good and vertuous as the true *Husbandman* is, should not be deprived of any comfort or felicity, which the Earth or the Creatures of the Earth can afford to him, being indeed the Right Lord and Master (next under God) of them both; as also for the necessity thereof, being the strengthner and enabler of the Mind, to undergo the weightiest affairs that can way poise or bear down imagination.

The necessity
and use of
Recreation.

Hence it comes, that the Heathen Sages or Wise men of the first World, founded with their *Laws*, their *Fests*; with their *Labours*, their *Olimpicks*; with their *Warefare*, their *Triumphs*; nay at this day we see the severest Pedants will give their Scholars their play-day, and the most covetous Masters will bind their hirelings but to certain hours, every toyl exacting (as out of duty) some time for Recreation: neither was there any *Stoick* found so cruel, either to himself or nature, but at sometime or other he would unbend his mind, and give it liberty to stray into some more pleasant walks, then the myry ways of his own wilful resolutions. As I have observed in the course of many men of exceeding strict lives, to whom albeit severity of possession, infirmity of body and age, or such like, have taken away all actual recreation, yet have their minds begot unto themselves some habits or customs of delight, which have in as large measure given them contentment, whether they were their own or borrowed, as if they had been the sole Actors of the same.

But why wade I thus far in this untroubled Stream? Let it suffice them, that as Recreation is most necessary, so to none it is more due then to the *Husbandman*, and herein you may not expect, that I will go about to elect and prescribe what recreation he shall use, binding all men to one pleasure; God forbid: my purpose

purpose is meerly contrary; for I know in mens recreations, that Nature taketh to her self an especial-Prerogative; and what to one is most pleasant, to another is most offensive; some seeking to satisfy the Mind, some the Body, and some both, in a joynt motion.

I will therefore, as far as my skill and knowledge will extend, figure forth to the life every severall recreation, leaving no limb or member imperfect, and then leave unto the choice of the *Husbandman*, that which shall best agree with his spirit: not doubting but as they are in themselves lawfull and modest; so he will use them according to the worthiness of his own, and their virtues. Now for as much as these sports are many and divers, I think it not amiss to begin and give that recreation precedence of place, which in mine opinion (however it may be esteemed partial) doth many degrees go before, and precede all other, as being, most royal for the stateliness thereof, most artificial for the wisdom and cunning thereof, and most Manly and Warlike for the use and indurance thereof. And this I hold to be the Hunting of wild Beasts in general; of which as Chases are many, so I will speak of them particularly in their places.

The praise of Hunting.

But before I proceed any further, I will tell you what *Hunting* is, and from the true definition thereof, make your way more easie and plain into the hidden Art of the same.

What Hunting is.

Hunting is then a curious search or conquest of one Beast over another, pursued by a natural instinct of enmity, and accomplished by the diversities and distinction of smells only, wherein Nature equally dividing her cunning, giveth both to the offender and offended, strange knowledge both of offence and safety. In this recreation is to be seen the wonderful power of God in his Creatures, and how far rage and policy can prevail against innocence and wisdom.

But to proceed to my main purpose, you shall understand that, as the Chases are many which we daily hunt, as that of the *Stag*, the *Buck*, the *Roe*, the *Hare*, the *Fox*, the *Badger*, the *Otter*, the *Beaver*, the *Goat*, and such like; so the pursuers or conquerors of these Chases (speaking of *Hunting* only) are but one kind of Creatures, namely, *Hounds*. Now of these hounds there are divers kinds, as the slow hound, which is a large grey dog,

The diversity of Chases.

The diversity of Hounds.

dog,

dog, tall and heavy, and are bred for the most part in the West Counties of this Land, as also in *Cheeshire* and *Lancashire*, and most woodland and mountainous Countries; then the middle siz'd dog, which is more fit for the Chase, being of a more nimble composure, and are bred in *Worcestershire*, *Bedfordshire*, and many other well mixt soyls, where the Champain and Covert are of equal largeness; then the light, nimble, swift, slender Dog, which is bred in the North parts of this Land, as *Yorkshire*, *Cumberland*, *Northumberland*, and many other plain Champion Countries: And lastly, the little *Beagle*, which may be carried in a mans glove, and are bred in many Countries for delight only, being of curious scents and passing cunning in their hunting; for the most part tyring, (but seldome killing) the prey, except at some strange advantage.

These Hounds are of divers colours, and according to their colours, so we elect them for the chase: As thus for example; The white Hound, or the white with black spots, or the white with some few liver spots, are the most principal, both to compose your Kennel of, and will indeed hunt any chase exceeding well, especially the Hare, Stag, Buck, Roe, or Otter; for they will well endure both woods and waters: yet if you demand which is the best and most beautiful of all colours, for the general Kennel, then I answer, The white with the black ears, and a black spot at the setting on of the tayl, and are ever found both of good scent, and good condition. The black hound, the black tann'd, or he that is all liver hew'd, or the milk white, which is the true Talbots, are best for the firing or line, for they do delight most in blood, and have a natural inclination to hunt dry foot; and of these the largest is ever best, and most comely. The grisset'd, which are ever most commonly shag-hair'd or any other colour, whether it be mixt or unmixt, so it be shag-hair'd are the best verminers, and therefore are chosen to hunt the Fox, Badger, or any other hot scents: they are exceeding good and cunning finders: and therefore have Huntsmen thought not amiss to have one, or a couple in every Kennel.

For the shape of your Hound, it must be according to the Climate where he is bred, and according to the natural composition

position of his body, as thus: If you would chuse a large, heavy, flow, true, Talbot-like Hound, you must chuse him which hath a round, big, thick head, with a short nose uprising, and large open nostrils, which shews that he is of a good and quick scent; his ears exceeding large, thin, and down-hanging, much lower than his chaps, and the flews of his upper-lips almost two inches lower than his nether chaps, which shews a merry deep mouth, and a loud ringer, his back strong and streight, yet rather rising, than inwardly yielding, which shews much toughness and indurance; his hillers will be thick and great, which approves a quick gathering up of his legs without pain, his huckle bones round and hidden, which shews he will not tire, his Thighs round, and his Hams streight, which shews swiftness; his Tail long, and ruff grown, that is big at the setting on, and small downward, which shews a perfect strong chine, and a good wind; the hair under his belly hard and stiff, which shews willingness and ability to endure labour in all weathers, and in all places; his Legs large and lean, which shews nimbleness in leaping or climbing; his Foot round, high knuckled and well clawd, and a dry hard sole, which shews he will never surbait; and the general composure of his Body so just and even, that no level may distinguish whether his hinder or fore-part be the higher: all which shew him of much ability, and that in his labour he will seldom find any annoyance. But if you will chuse a swift light Hound, then must his head be more slender, and his nose more long, his ears and flews more shallow, his back broad, his belly gaunt, his tail small, his joynts long, his foot round, and his general composure much more slender and Gray-hound-like: and thus in the generality for the most part, are all your *Tork-shire* Hounds, whose virtues I can praise no farther than for scent and swiftness: for to speak of their mouths they have only a little sharp sweetness like *Gig*, but no depth or ground like more solemn musick.

Now to speak of the composition of Kennels, though there is a most certain known better-hood, yet it is to men like beauty, each allowing best of that which agrees with his own affection; therefore when you intend to set up a Kennel of Hounds, examine your fancie what be the best pleasures you take in

The composition of Kennels.

The middle-
siz'd Dog for
running.

Hounds, whether it be cunning in hunting, sweetness, loudness, or deepness of cry; whether it be for the training of your Horse, or elf: but meerly for the exercise of your own body, being otherwise subject to grossness and infirmity: If it be for cunning hunting, you shall breed your dogs from the slowest and largest of the Northern Hounds, and the swiftest and slenderest of the West-country Hounds, being both Male and Female, approved to be staunch, fair, and even-running, of perfect fine scent, and not given to lie off, or look for advantages. These Hounds will neither be so exceeding slow, that you will waste many days without some Fruit of your labor, or so unnimble, that you shall need men to help them over every hedge, as I have many times seen to my much wonder; but having both strength and nimbleness, will hold you in continual delight and exercise; for these middle siz'd dogs are neither so swift that they will far out-run the scent, and so fetch many tedious rings to recover it; nor so slow, that for want of speed they will lose the scent, and let it grow cold by their own laziness, but being ever and anon upon it, bring Chase to such a narrow exigent, that the poor Beast shall be forc'd to try all the Skill, nature or strength hath lent it, to preserve life: and the Hounds on the other side, all their pains, and the Huntsman's cunning, to undo intricate doubles, Skifs, Squats and windings with which they shall be perplexed; and in this mediocrity of hunting, shall your eye (if the covert be not too extream thick) take a perfect view of all the art and cunning in every passage; so that I conclude the middle sized Hound, of good strength, sound mouth, and reasonable speed, which will make a Horse gallop fast, and not run, is the best for the true Art and use of hunting.

For sweetness
of cry.

If you would have your Kennel for sweetness of cry, then you must compound it of some large dogs, that have deep solemn Mouths, and are swift in spending, which must as it were bear the base in the consort; then a double number of roaring, and loud-ringing Mouthes, which must bear the counter-tenor; then some hollow plain sweet Mouths, which must bear the mean or middle part; and so with these three parts of Musick, you shall make your cry perfect: and herein you shall observe, that these Hounds thus mixt, do run just and even together,
and.

and not hang loose off from one another, which is the wisest tight that may be; and you shall understand, that this composition is best to be made of the swiftest and largest deep-mouthed dog, the slowest and middle-siz'd dog, and the shortest-legg'd slender dog, amongst these you may caſt in a couple or two ſmall ſingle Beagles, which as ſmall trebles may warble amongst them: the cry will be a great deal the more ſweet.

If you would have your Kennel for loudneſs of Mouth, For loudneſs of cry. you ſhall not then chooſe the hollow deep Mouth, but the loud clanging Mouth, which ſpendeth freely and ſharply, and as it were redoubleth in utterance: and if you mix with them the Mouth that roareth, and the mouth that whineth, the cry will be both the louder and the ſmarter; and theſe Hounds are for the moſt part of the middle ſize, neither extream tall, nor extream deep ſlew'd, ſuch as for the moſt part your *Shropſhire*, and pure *Worceſterſhire* dogs are, and the more equally you compound theſe mouths, having as many Roarers as Spenders, and as many Whiners, as of either of the other, the lowder and pleaſanter your cry will be, eſpecially if it be in ſounding tall woods, or under the echo of Rocks.

If you would have your Kennel for depth of mouth, then you For deepneſs of cry. ſhall compound it of the largeſt dogs which have the greateſt mouths and deepeſt ſlews, ſuch as your *West-Country*, *Cheshire*, and *Lancashire* dogs are, and to five or ſix baſe couple of mouths, ſhall not add above two couple of Counter-tenors, as many means, and not above one couple of Roarers, which being heard but now and then, as at the opening or hitting of a ſcent, will give much ſweetneſs to the ſolemnneſs, and graveneſs of the cry, and the Muſick thereof will be much more delightful to the ears of every beholder.

If you would have your Kennel for training of your Horſe For training Horſes. only, labouring thereby to bring him to the full perfection of ſpeed, truth and roughneſs, then you ſhall compound your Kennel of the lighteſt, nimbleſt, and ſwifteſt dogs, ſuch as for the moſt part all your Northern Hounds are, which running ſwiftly away with the chace, will draw up your Horſe to that extraordinary ſpeed, that he will forget all caſe of loitering, and acquaint himſelf daily with the violence of ſuch exerciſe, being ſo familiar

familiar therewith; that in the end it will be less troublesome to him than a slow gallop; and hence it was and is, that the North parts, are so famous for the truth and swiftness of their Horses, above all other Countries in this Kingdom; for it is most certain, that their Horses are not better bred there, than in other places, but their exercise is much stronger, and violent, through the natural swiftness of their Hounds, in so much that unless a Horse either out of nature or education, be brought to a more than ordinary speed, it is impossible that his Master should either see sport, or keep company with his Companions.

A good caveat
at for Gentle-
men.

Therefore I would have all young Gentlemen, which are addicted to the delight of hunting, or running Horses, by all means to train them up after the swiftest Hounds: for it is the greatest deceit and counterfeite a man can bestow upon himself, to do the contrary, as I have many times seen in my own experience, when a Gentleman, who hath supposed his Hounds to be swift, which indeed were but of a middle speed, & have seen his Horse follow them all daily, lustily and strongly, in every Chase able to command the foremost Hound at his pleasure, he hath immediately in his own judgment concluded his Horse swift and matchable with the best, and from that Opinion ingaged him against a known swift Horse, for great sums of money: then when the day of trial hath been come, the Horse which had been trained after slow dogs, coming to follow those that were indeed swift, hath been drawn so far beyond the usual manner of former exercise, that he hath given over the Chase before the day hath been half spent.

This caveat I give for all mens instructions, because I have seen the loss which hath grown thereby. And now to return to my purpose; your Kennel thus composed of the swiftest Hounds, you shall as nigh as you can, sort their mouths into three equal parts of Musick, that is to say, Base, Counter-tenor, and Mean; the Base are those mouths which are most deep and solemn, and are spent out plain and freely, without redoubling: the Counter-tenor are those which are most loud and ringing, whose sharp sounds pass so swift, that they seem to dole and make division; and the mean are those which are soft sweet mouths, that though plain, and a little hollow, yet are spent
smooth.

smooth and freely ; yet so distinctly, that a man may count the notes as they open. Of these three sorts of mouths, if your Kennel be (as near as you can) equally compounded, you shall find it most perfect and delectable; for though they have not the thunder and loudness of the great dogs, which may be compared to the high wind-Instruments, yet they will have the tunable sweetness of the best compounded consorts ; and sure a man may find as much Art and delight in a Lute, as in an Organ. But here methinks, a too tender lover of a Horse stands at my elbow, and pulls me by the ear with this Objection, That to train Horses after dogs of this exceeding swiftness, will be a labour of that violence, which a young Horse will hardly endure: For first, it will draw him so suddenly from his wind, that it will breed stopping in his body, and choaking up the passage of his breath, hazard the breaking of his Lungs, or the rim of his Belly, as hath been many times seen in Horses of great metal: Next, the Horse being young and unacquainted with exercise, it will breed in him a weariness and loathing of his labour, and nothing is well done that is not done with delight: Lastly, the Horse being foul of body, and unpurged, it may melt his grease too soon, strain his sinews and tender gristles too much, and breed many diseases foul and incurable, of which only too violent labour is the ground-work.

Objections
against swift
Hounds.

To this Objection I thus answer, That albeit the labour be for the time most violent, yet it is not of so long continuance as that which is more slow ; and to run twelve score swiftly, is not so painful, as to walk twenty miles; for you must understand, that these swift Hounds out of their metal and swiftness, do soon overshoot and run beyond the scent ; and then retiring back upon it again, give the Horse time to ease himself, and catch new breath ; whereas the slower dogs carrying the scent ever before them, keep your Horse to a continual labour, which is more painful, and makes him a tough enduring Lacquey, but not a most swift-running Gentleman: Besides, the many faults and cissing about of the swift dogs, add such a comfort unto the Horse, who perceiveth the strength of his labour to have no ease till he come up to those faults, that he will out of the willingness of his own nature, double his courage to pursue the most
Swift.

swift, seeing his ease is ever the greater, by how much he keepeth ever nearer to the Hounds. For the danger of bursting, melting his grease, and other infirmities, the discretion of the Rider, and skill of the Keeper must prevent; of whose Offices I have written largely in former Chapters in the Book, called *Cheap and Good*: for be assured, those dangers may happen as well after the slowest dogs, as the swiftest.

Correction of
swift Hounds
haste.

But to my purpose, since Hounds are the subject of my discourse: You shall understand that these swift Hounds are, as is before said, out of their haste, nimbleness and mettall, more subject to make defaults than other Hounds, yet full as curious and good of scent as any other, as you shall perceive by the quick knowledge and apprehension of their own errors, casting about of themselves, and recovering the scent, and so going away with the same, before any Huntsman can come in to help them: yet I would wish every Gentleman-like Husband-man, in the composition of this Kennel, to have some staunch old dogs amongst them, which running more soberly, yet close with them, may sit upon the scent, when they overshoot it, and so call them back, and give them their lots without more trouble. Also I would have both in this Kennel, and every other, a couple at least of good finders, being dogs staunch of mouth, and not able to open, except they lie upon a certain trayl; for these will be great furtherers of your sport, and make your younger dogs a great deal more mute and painful.

Of the high-
way Hounds.

You shall also in this, and all other Kennels, have at least a couple of good high-way dogs, that is to say, Hounds of such cunning and perfect scent, that they will hunt as well upon a dry, hard, high-way (where you cannot pick forth passage of your Chase) as upon the freshest mould, or will hunt as truly through Flocks of Sheep or Herds of Beasts, as upon the grounds where few or no Beasts come, these are called Hounds for the high-way, or guides of the Kennel, and are exceeding necessary, and fit for all mens pleasure; for they take from the Huntsman, both sense of pain, and anger.

The Kennel
for exercise of
body.

Lastly, if you would compose a Kennel only for the exercise of your own body, or maintenance of health, you shall first draw into consideration your own ability, as whether you

you

you will make your exercise on foot, or Horse-back. If your delight and ability draw you to hunt on foot, then I would wish you to compose your Kennel of the biggest and slowest Dogs you can get, respecting only cunning hunting, and depth of Mouth; and this Kennel that you make so staunch and obedient to your command, that when they are upon the hottest scent, or in the earnestness of the chase, to step before them, and call your hunting pole but before their eyes, they shall suddenly stop, and hunt after you in full cry, with no more speed than it shall please you to lead them; and then when you please, to let them go before you again, to pass away with the scent roundly, and without stay.

This manner of hunting will carry with it a twofold delight, the one of enjoying the musick of their voices, the other the cunning of their Noses; each striving to go before, yet none presuming without leave to go before: by this Rule you shall bring the hottest scent, and coldest scent to one manner of swiftness, and so neither offend your body with too much nor too little exercise. But if you will take your exercise on Horse-back, because infirmity will not let you run a foot, then you shall compose your Kennel of the slowest, or middle-sized Hounds, who shall have both good mouths, & loud, and noses of the most ready scent, and perfect hunting; and if you bring these Hounds also to the former obedience of stopping and hunting after you, it will be exceeding good and delightful, both to your eyes, and ears, and so bring your Hounds both to temperance and coolness in hunting, that taking the Frensie and greediness of haste from their minds, they will make your sport much longer, and less weary, than else it would be.

But some will answer me, That albeit they have infirmities, which detain them from running afoot, or labouring like Ladies or Drudges, yet they can endure ordinary and orderly walking, such as shall be fit for any moderate exercise; and therefore would hunt on foot: yet the great Hound they like not for two causes; first he is chargeable and troublesome in keeping; and next his noisomeness and pestering company in a house that is but strait, and of no more than necessary use. To these I answer, That it is good for them to keep the little small Mitten-Beagle, which

which may be companion for a Ladies Kirtle, and in the field will hunt as cunningly as any Hound whatsoever, only their musick is very small, like reeds, and their pace like their body; only for exercise, and not for slaughter.

Of the hounds kennel.

Having thus composed your Kennel of Hounds according to the humour of your own fancie and delight, it shall be meet then that you frame a Kennel or house to keep them in, wherein they may lie dry, and have their food and other necessaries about them, without troubling your dwelling house, or giving offence by their greediness and ravening.

The situation of the kennel.

This Kennel for Hounds, would be placed a pretty distance from your dwelling house, near some river, pond, spring, or other fresh water: it would also stand against the side of some bank or hill, which looking directly against the East, the morning Sun might rise upon the same, and not lose the sight of it till at least two or three hours after Noon, which will be a great refreshing and comfort unto the Hounds, which love naturally to stretch them, and pick themselves in the Sun: against the side of this hill, would be cut or digged, divers large and broad seats one above another, containing at least five foot in breadth, and two foot and a half in height, which seats would be either boarded or watled with stakes and small wands on the sides, to hold up the earth from falling, and also close boarded aloft; whereon you shall lay fresh and sweet straw for your dogs to lie upon: the number of these seats would be according to the number of your hounds, and the quality of the earth in largeness: over these seats would be made a close and well tiled shed, open to no way but upon the East, and in such manner that it may defend either all or most part of the seats from rain, wind or any tempest: from the lowest part of these seats forward, you shall make a large green court, being either walked, paled, or otherwise very strongly fenced about, in which your hounds may play, sport, scummer, or do other offices of nature fit for their health: also in this court, in the most convenient corner of the same, you shall build a little house or lodge, with a spacious and large chimney in the same, wherein in the winter-time you shall allow fire, before which your dogs returned (from hunting) may stretch, pick, dry and trim themselves, which is an exceeding

ing comfort unto them, and will make them more strong and able to endure their Labour, and also keep them wonderfully well both from the mangy and other filthy diseases which proceed from colds taken after violent heating. In this Chimny, your Huntsmen shall have a large Cauldron, and other necessaries, as Ladles, Skummers, and such like; for preparing and making ready of all such warm meat as you shall allow to them, which if it be sweet is called the Mange: if otherwise, Carrion or Garbage: above this lower Room shall be your Huntsman's Lodging, wherein he shall also keep his Couples, Liams, Collars, Traffes, Boxes and Pots with Salves and Oyntments, for the cure of such infirmities as shall happen among them, and all other necessaries any way belonging to his office. In another part of the court, and neereſt unto the house, you shall place Troughs and Tubs, some for their meat, and some for sweet Water; all which must be kept very neat and clean; and Water must by no means at any time be wanting, yet oft renewed, and the vessels scoured for sweetness sake, for the Huntsman ought to hold it for a Rule, that nothing bringeth more health than cleanliness. Into this Kennel you shall by no means bring at any time Carrion; because it will make the place unsavory, and unfit for any man of worth to look into, and sure it ought to be a place fit for every worthy Eye.

Now your Kennel being thus orderly, and well prepared, it is meet that I shew what meat is meetest for Hounds; how it shall be prepared, and how they shall be fed. First then, intending that I only speak of hunting Hounds, that is to say, Hounds which are in continual use and action, you shall understand that in their days of rest, the strongest and lustiest meat you can give them both for raising them up when they are low hunted, or for keeping them in strength when they have lust within them, is either horse-flesh newly slain and warm at the feeding, the intrals and garbage of Beasts (Lungs only excepted) or the heads, plucks, and bowels of Sheep, or generally any Carrion which is not old, nor cold after the death. To feed them for perfectness of hunting, and to keep their scents fine, pure and clean, or to purge the stench of the carrion out of their noses, that thereby they may undergo the work with more cunning, the best food is to give them

Of Hounds.

C c

Mange,

Mange, made either of ground-Oats, Barley-Meale, Branne, or Mill-dust, well scalded and boyled together, or any of these two mixt together and scalded with Beet-broth, or any other broth in which flesh hath been sodden, so as it be not too extream salt.

Now for the use and manner of feeding with these meats (as I said before) horse-flesh, garbage, and other carrion is, only to breed strength, and lust in a hound, and is to be given only when a hound resteth; because the strength and smell of the same will so cloy and stop the hounds nostrils, that he can hardly distinguish, or undertake any finer scent, and so breed much hindrance to his hunting: Therefore you ought ever to feed your hounds at least the day before you hunt, if not more, with sweet meat.

Now for the manner of feeding with horse-flesh, or any other carrion, you shall be sure to have it a good distance from your Kennel, and so as it may be no annoyance either to your own Neighbours, or Travellers in the high Way; then first before your Hounds touch it, with your Knife take off the Skin, then open the body, take out the bowels and rip them; then, if the body be more then either hounds can, or must eat, take off a Legg, or a Shoulder; or such part as you think fittest to preserve, and lay it by; then let your hounds feed on the rest, till their bodies be well filled: which done draw your hounds home, and upon some stange for the purpose, carry with you that which you saved; which, as soon as you have shut up your hounds, you shall bear to the River, or fresh Water, and lay it in the same until you have occasion to use it; for it will keep it sweet a week or more at least, if need require.

Now for feeding with Mange, or sweet meet, it would ever be done the day before you hunt, and as it is to be prepared in the Kennel, so you shall let them eat it in troughs, within the Kennel, for that will make them take delight in the place; and this Mange must ever be given warm, and made somewhat thick, and if you white it over with milk, or Butter-milk, and if you cast into it chippings, crusts of bread, bones, broken meat, or scraping of trenchers, it will be better, and they will eat it with more greediness.

If you have Hounds that are poor, weak or sickly, which you would suddenly recover and bring unto hunting: Then if you take Sheeps-heads, Wooll and all, and hack, hew and bruise them in many pieces; then boil them with Oat-meal and Penny-royal, and make strong Pottage of the same, and give altogether warm to your sick Hounds, and it will suddenly recover them; if once in a week also you give them a full meal of warm horse-flesh, it is very sovereign.

Meat for sick
and weak
Hounds.

Now for the best times of feeding, it is held amongst all our best experience Huntmen, to be in the daies of rest, early in the morning before Sun rise, and in the evening at the Sun set: But in the daies of hunting, you shall let them go fasting out of the Kennel and feed them as soon as you come home to the Kennel, or before in your way homeward, if you have any horse-flesh, or other Carrion readily provided: otherwise with such meat as you have; so it will fill their bellies; for a Hound by no means would be pinched of his belly after his labour, and therefore be sure if your meat be course to fill his guts well, if it be sweet, strong and comfortable, then less will serve him.

Best hours of
feeding.

And here I think it meet to speak of a convenient proportion of Food, for the maintenance of a Kennel of good hounds: Where in you shall understand that three bushels of Oats or Barley-meal, with half so much Bran or Mill dust, is a fit weekly proportion to keep nine or ten couple of Hounds; with a little help of horse-flesh, if the Huntsman be any good Husband, and painful as he ought to be in finding out Horses, scraps, crusts and bones which almost abound in every mans house of any worth or reckoning and by imploying that which is saved in the daies of labor to increase the proportion when need shall require: Many much larger quantities I have known, and do know allowed this day in divers places; but I have held it an abuse to the Master and either a covetousness or negligence in the Huntsmen, by whose unskilful greediness, I have seen many tyred out of the pleasures. Therefore be assured this quantity already named, will fully suffice, nay, even to please a most wanton curiosity; and surely much less if a painful Huntsman, have the government; for I shall never see fairer or better kept Hounds, then I have seen maintained with half this proportion; but as I would not be too

A proportion
of meat.

lavish in my directions, so I would much less be too strait handed, hoping that every man of honesty and trust will order his affairs with discretion.

Ordering of
Hounds after
hunting.

Now for the ordering of your Hounds after they have done hunting, you shall, if you feed them abroad or otherwise, as soon as you bring them into the Kennel, wash all their feet either with a little warm Butter and Beer, Beef broth or Water wherein Mal-lows and Nettles have been boyled soft and tender, you shall pick every cley, and search the foot for Thorns, Stubs, or any other pricklings; you shall look that the straw whereon they lye, be sweet and fresh; and if it be in the strength of Winter after they are fed, you shall suffer them for an hour or two to beak and stretch themselves before the fire, ere they go to lye down for all night, and by no means trouble them as long as they lick, pick or trim themselves; but that once finished, you shall force them from the fire, and make them find out their Lodgings.

CHAP. II.

The Caring of all manner of Infirmities in Hounds.

NEXT unto these Precepts, it is meet you be skilful in Curing of all the Diseases in Hounds, of which as there be many, so here you shall partake many rules for the same, both perfect, and excellently approved by late experience. And first of all, in as much as it is an infirmity of all other most general, natural, and as it were not to be divided from Dogs, I will begin with the killing of fleas and lice, and such like vermine in Hounds which proceeds from filthy keeping, rotten and moist lodging, and want of shifting of straw when it grows short by much lying on: if then your Hound be troubled with fleas or lice, you shall take Rue or herb of Grace four or five handfuls, and boil it in a gallon of running water till a pottle be full consumed, then strain it through a course cloath, and put to it two ounces of strong *Stavesacre* beaten to powder, and being warm, bathe your Hound therewith and it will destroy them.

Of killing fleas
and lice.

To kill worms.

If your Hound be troubled with worms, which is very general amongst them, especially the young Hounds, then you shall take a pint of new milk and mix it with a good quantity

city of Brimstone, and so give it luke-warm unto the Hound, and it will not only scow away all manner of wormes, but all other filthines bred in the body of a Hound, either by labour or surfeit.

If your Dogge have been bitten by either Snake, Adder, or any other venomous thing, take the herb Calaminth, and beat it in a mortar, with Turpentine and yellow Wax, till it come to a salve, and then apply it to the sore and it will heal it: Also if you boyl the herb in milk, and give the dog it to drink, it will expel all inward poyson.

Biting with
venomous
Beasts.

If your Hound have been bitten with a mad Dogge, which is a disease exceeding dangerous and mortal, you shall presently wash the place so bitten with Sea water or a very strong brine, and it will save and cure him; or else take the herb called Yarrow, and beat a handful thereof in a mortar, with a handful of wheat till it come to a salve, and then lay it to the sore, and it will heal it: and if you pour into his stomach as much Mithridate as a hazel nut, dissolved in sweet Wine, it will wonderfully scour and preserve him from the infection of the inward poyson.

Biting with a
mad Dog.

The infirmity of madness it self in Dogges, is common and oft to be seen, and though it be altogether incurable, yet if a man be experienced in the first signs or characters of madness, he may prevent divers mischeifs, and most mortal evils, which ensue for want of such knowledge, and albeit he lose one Dogge, yet he may save all the rest: the first sign therefore to know when a Dogge is entering into this disease, is a melancholy separating himself from other Dogges, and walking up and down alone, oft casting up his head into the wind, and looking upward, his tayle at the setting on, rising upward, and the rest hanging down, his Mouth will foam and be full of slaver or white froth, as he runneth up and down he will hastily snatch at every thing that he meeteth with, yet, but only give one snatch and away, his eyes will be red and more fiery then other Dogges, and his breath will be strong and of a filthy savour: any of these signs when you shall perceive, you shall presently separate him from other Dogges and kill him, for unto the disease is no cure.

Of a mad Dog
and the signs.

If your Hound be gaul'd, or his Skinn torn in any part, you Of Gauling.
shall.

shall only take *May Butter*, yellow *Wax*, and a little unslackt *Lime* beaten together like a salve, therewith anoint the sore place and it is a present cure.

Of a Tetter.

If your Hound (as they are much incident thereto) have any Tetter or dry Scab, you shall take of black Ink, the juce of *Miris* and *Vinegar* of each alike quantity, and mix them together with the powder of *Brimstone* till it be thick like a salve, and then anoint the Tetter therewith till it bleed, and it will soon kill and cure it.

For the Itch.

If your Hound be troubled with the Itch, you shall take *Nerve-ox* and beat it with quick silver till the quick silver be kill'd, and the salve turned to a pale yellow colour, then with the same anoint the Dog before a good fire, and chase it well against the hair and it will cure him.

Of the Mangy or Scab.

But if your Hound be troubled with the Scab or Mangy, then you shall take a penny-worth or two of the best Gun-powder you can buy, and mixing it with very strong *Wine Vinegar*, make it thick like puddle, then with the same anoint all the places where he scratcheth till they bleed, and it will kill the Mangy; there be others which do use to cast their Dogs in the Lime-pits of Tanners or Glovers, and force them to swim up and down the same, and it will kill the Mangy; yet there must be a great care taken in putting the Dogs in, lest doing it rashly, the Lime-water get into their eyes, which is very dangerous, and will hazard their burning out.

Of Wounds.

If your Hound shall receive any Wound, whether it be with sharp or blunt weapon, or any accident whatsoever, although his own Tongue be a sovereign salve, yet if it be in any part, where it thereto do or will not stick it, the best cure is to wash it with warm *Butter* and *Vinegar* mixt together, and then anoint it with a little *Vinegar Turpentine*; but if it be a hollow wound, and much of force be sented, then you shall either tent it with sweet *Butter* and *Oat-meal*, wrought together to a salve, or with yellow *Wax* and *Deer-suet*; there be some that will use for a tent a small candle end, and it is very good if the tallow be sweet, but if it be putrified then it will poyson and corrupt the wound.

Of a Canker in the Ear.

If your Hound be troubled with a Canker in his ears, which is a grief much incident unto them; you shall first tent the hole

if you find any, with dry cork, and after wash the sore with Vinegar and Allom, mixt together, till the flesh look raw, and after dry it with burnt Allom only.

If your hound be surbaited, you shall wash his feet with Butter and Beer Boyled together, and then bind to the soles of his feet young red Nettles, chopt very small, or beaten in a mortar till they come to a salve. Of surbaiting.

For any manner of bruise which shall happen to your Hound, either by rush, spurn, stroke or otherwise, if it appear and swell outwardly, you shall bath the place, with chick-weed and groundsel, boyled in strong Ale dregs till they be soft, and it will allay the swelling: but if the bruise be inward, then you shall with a horn give the Dog a pint of new Milk, and a quarter of an ounce of *Sperma ceti* well mixt together, or for want of *Sperma ceti*, double so much *Stone-pitch* beaten to fine powder. Of Bruise.

If your Hound be troubled with the stone or other filthy matter, which makes him that he cannot piss, you shall take the seeds of the Herb *Gratum folia* or *Gromel*, and bruising them give them to the Hound in half a pint of white Wine. For the Stone.

If your Hound (as it is natural to Dogges) be so costive that he can by no means skummer, you shall first take a piece of a tallow candle, about three fingers in length, and thrust it a good way into the rect of the Hound, and then hold down her tayle hard a quarter of an hour or more, and then give it liberty, and when he hath emptied his belly, you shall give him to drink five or six spoonfuls of Sallet Oyl, and it will cleanse him sufficiently. For costiveness.

If your Hound be troubled with any disease in his Ears, whether it be a continual running, or any other Imposthumation, you shall take Verjuice and Chervile Water, and mix them together and each morning and evening drop a spoonful or two thereof into the Dogs Ears, and you shall find it a present Remedy. For any disease in the Ear.

If your Dog at any time be troubled with sore eyes, of what Nature or Quality soever the grief be, you shall take a leafe or two of ground Ivy, and chewing it well in your mouth, and sucking out the juice, spit the same into the Dogs eyes morning and evening, and it will cure them. This ground Ivy is a little round, rough, jaggy leafe, and grows in the bottom of hedges. For sore Eyes.

If your Hound shall happen to break Legg or any other bone, you shall first with your hand place it in his true place, and see that it stand streight and even, then bathe it in the warm Oyl of Swallows, or the Oyl of Mandrake-apples, and wrap it about two or three times; in scar-cloth made of yellow Wax and Deers suet; which done, splent it with flat splents of wood, and so role it with a strong roler, and let it so rest nine daies at least, before you unsplent it, but remove not the scar-cloth for fifteen daies, and you shall see the bone will knit strongly and firmly.

CHAP. III.

Of the breeding of all manner of Hounds.

HAVING thus passed over the election of Hounds, composition of Kennels, dieting, and curing of all sorts of diseases, I hold it meetest now to follow with some short Precepts the breeding of Hounds, because it is exceeding hard, for any man to have a Kennel of Hounds from gift to purchase without much imperfection: for though one friend give you a good Hound, another sells you a good Hound, yet how their goodnesse will agree when they run together, is very disputable: and truly unless your Hounds have one speed, one tuneableness of voyce, and one manner of Hunting, your pastime will be much disorderly; which there is no way to get so easily and truly, as by the breeding of your hounds: for one and the same birth produceth one and the same qualities; therefore having a Hound and a bratch of that size, voyce, speed, scent, proportion, and general goodnesse which agreeth best with your own nature and condition, you shall put them together to ingender and breed, either in *January*, *February* or *March*, according as they shall grow proud, for those are the three most principal moneths in the year for Hounds, Bitches or Bratches, to be limed in: not but that they may conceive and bring forth as good Whelps in other moneths; but because there will be much less of time in the entering of them: for if a Bratch be limed in *January*, she will whelp her litter in *March*, and so they will be ready to enter in the first beginning of hunting-time: if she be limed in *February*, she will whelp in *April*, and if she be limed in *March*

Hounds must
use one ano-
ther.

The moneths
to breed in.

March, the will whelp in *May* following: and in all these three Moneths there is not a dayes loss, for the entring of the whelps, which is an especial care to be observed of Huntsmen.

Also if you shall let your Hounds ingender in three months
aforeſaid, you ſhall not forget to obſerve as near as you can, that
when you put the Dog and Bitch firſt together, the Moon be
either in the ſign *Aquarius* or *Gemini*; for it is held amongſt
the beſt Hunt-men of this Land, that the whelps which are
ingendred under thoſe two ſigns, will never run mad; and for
the moſt part, the Litter will have at leaſt double ſo many Dog-
whelps, as Bitch Whelps. When your Bitch is near whelping,
or hath whelped, you ſhall ſeparate her from other Hounds, and
have a private Kennel for her, where ſhe may be alone without
company of other hounds; and you ſhall duly every night ſee her
kennel'd in the ſame, that ſhe may take acquaintance and delight
therein; and when you feed her particularly, you ſhall feed her
in that kennel, that taking a love thereto ſhe may not ſeek out
other unfit and unwholeſome places to whelp in; for where a
Bitch firſt whelpeth her Litter, if they be removed, ſhe will not
leave carrying her Whelps up and down, till ſhe have found the
ſame place again, or ſome other perhaps more unfit then the for-
mer, and ſuch carriage of Whelps by the Dam is very ill and dan-
gerous: this kennel where your Whelps ſhall remain, ſhall not
be kept cloſe, but open, that the Bitch may have liberty to go up
and down after twenty four hours ſpace, which time ſhe ſhall be
kept very well, cloſe and warm, that ſhe may perform the natu-
ral office of a Dam to her Whelps.

You shall not suffer your Whelps to suck above two moneths at the most, but then you shall Wean them, and if the house you keep be of great receite and many servants, you shall let your Cook bring up your best Whelps, and your Dairy-maid your second best, and the rest you shall put forth amongst your friends, or Tenants, according unto the love you possels in the Country.

Now when your Whelps are brought up, you shall not enter them into hunting before they be at least a year and half old, as Whelps.

D d

thus,

Under which
signs to breed

Ordering of Bitches after Whelping.

When to wear Whelms.

When to enter Whelps.

thus, if your Whelps were whelped in *March*, then you shall not enter them until *September* come twelve moneths after: and if they were whelped in *April*, then you shall enter them in *October* come twelve moneths after. And so forth, for the rest of the moneths.

How to enter
Whelps.

Now for the manner of your entring of Whelps, you shall draw them abroad in the pleasantest of the day, with the most Raunch and best hunting Hounds you have, leaving at home all babling and flying Curs; and if you can, you shall have your Hare ready set before you come, (for the Hare is the principal chase you can enter Whelps upon) and then putting her from her form, and viewing perfectly which way she taketh, after the scent is a little cooled, lay on your Hounds, and give them all the advantages you can for the hunting of her, as by wind, view, hollow, or pricking her passage: and if they shall chance to kill her, you shall immediately take her from the Hounds, and not suffer them to break her, for it is an evil custome, but your self stripping away the Skin, shall cut her all to pieces, and give every part of her to your young Whelps, which will breed in them great courage and delight in hunting.

Observations
in the entring
of Whelps.

You shall observe in the entring of your young Whelps, that they hunt fair and even, without advantage, or seeking any way to gain ease, as by lying off from scent, thwarting or crossing when they are behind to get even with the foremost Hounds: any of which when you shall perceive, you shall immediately beat them in with your hunting pole, and compel them to take the scent before them: also if any of them be giddy headed, and out of mettle will run before the other Hounds clean from the scent, in this case also you shall beat them soundly back, and bring them back to the scent, and force them to take it with the rest of the Kennel. Also if any young Hound will not strike upon a default but run babling away without the scent, drawing away the rest of the Kennel to follow him; in this case also you shall scourge him back and compel him to stand and labour upon the default, till some of the elder Hounds undertake it, then you shall cherish all both with horn and voyce into the Chase.

Lastly, if you find that any of your young Whelps trust more

to his own scent than to the rest of his fellows, and so by that means hunteth at least twenty foot sometimes behind the rest, making his defaulte by his own nose, and not their own leading, yet hunteth very just and true : In this, case you shall by no means over-go or over-ride the Whelp, but give him all comfort and encouragement you can, and let him take his own time and leisure, for use and experience will quickly make him Skillful, and the Skill will soon carry him up, among his fellows where hee will soon become a principal Leader : and thus much for Hounds, and the composition of Kennels.

CHAP. IV.

Of all the severall Chases which Hounds are to hunt.

Here hath already (by many well experienced men) been so much written of this Subject, that I know not well what to write, except I should in some sort repeat another mans tale: from which I am so far different (having vowed to my self, by no means to meddle with any thing formerly written) that the strictest examiner whosoever, shall not find me guilty of the least blemish therein : yet since I must necessarily in this case write something, I will as briefly as I can set down some material and special notes, and for the main substance if they desire a long continued circumference (though this is sufficient for any understanding wit) referre them unto old *Triftram's* Book, translated by Mr. *Turberville*, and such other Books, where they may find compleat satisfaction.

To speak then first of the Stagge, which is the most Princely and Royal Chase of all Chases, and for whom indeed this Art of Hunting was found out, and invented : he is of all Beasts the goodliest, stateliest, and most manly, and for the use of Man, the fullest both of outward and inward profit as in the flesh for the nourishment of Mans body, and in his other Members for helps in Physick : as the bone in his Heart, which is Sovereign for all inward faint sicknesses, for Poyson, the Plague, and hard Travail in women ; his blood excellent for all kind of Fluxes,

The Hunting
of the Stagge.

and to make the Skin white and smooth : his pizle good for the Cholick and Bloody-flux; His Horn a most soveraign Cordial against venome ; his suet for swellings, Gouts and Humors, and his Skin, which is ever a during and Gentlemanly clothing : and of Stags, the oldest and greatest is the best.

How to know
an old Stagge,

The perfect sign to know an old Stagge by, are these ; if when you take his view upon the ground, you see he hath a large foot, a thick heele, and a deep printing, and open cleft, and a long space ; then be assured he is old : also if his legge be long, and his bone thick, it shews age, besides your old Stagge doth not over-reach, when your younger Deer doth : also you shall know his age by his ordure, as thus if it be printed (as it will be from *July* to *August*) or writhen round, or flat or broad, as it will be in *June*, and therewithal be gross and fatty, then he is an old Stagge ; but if contrarily it be small and dry, then he is but a young Deer : you shall know his age by the tines of the hornes, for if he have ten or twelve or fourteen times, he is a Deer of reasonable age ; but if the beam bee thick and great, then hee is an old Deer ; so if hee carry but some six or eight tines, and a small beam, then he is a young Deer, and not above three or four years old, for the Red Deer is said the first year to have no head, the second but only daggers, and the third times.

The cast off
Heads.

Stags yearly cast their Heads in *March*, *April*, *May* or *June*, and in no other moneths, according to the goodness of the Soyl wherein they feed, for the richest ground beareth ever the earliest Deer; and a Deer is never said to be in season, nor may hee by good rule be hunted till he have cast his head.

How to find a
Deer.

The principal quality in a Huntsman, is, to know how and where to find a Deer ; for if he be ignorant in their haunts, hee may wander long, and lose much labour. Therefore hee shall know, that a Red Deer naturally haunteth in *November* amongst Furs, Whins or thick Shrubs ; In *December* amongst thick and strong Woods, In *January* in Corn-fields of Wheat and Rye, In *February* and *March* amongst young and thick bushes ; In *April* and *May* in Coppices and Spring ; In *June* and *July* in out-woods, and purlews which are nearest unto green Corn,

and

and in September and October, after the first showers of rain they go to Rut.

Now when the Huntsman will at any time search any of these places to find his game, hee must bee careful by no means to go down, but up the wind; for a Deer is of most dainty scent, and upon the least fault will fly and leave his feed: therefore hee must come warily and closely with a quick ear, and a ready eye.

Now the best time to find out your Game, is early before Sunne rise, at which time the Deer goeth to his feed: from whence you shall watch unto his Leir, and having lodged him, you may return home and prepare all things for the days hunting; for be assured, except violently compel'd, he will not stir till Evening. The hunting of the Stag.

Now for the manner of his hunting: you shall first cast off your finders, neer his place of lodging, and after they have hunted him about a ring or two, you shall cast in the rest of your Hounds, and being in full cry and main chase, you shall give them comfort both with horne and sight of the Deer, and take what especial notes or marks you can from him, so that as much as is possible you may know him from any other Deer: then at every default, as soon as the Hounds are in cry again, you shall make in to the hunted Deer, and view him, and if you find it to bee a fresh Deer, you shall rate the Dogs, and bring them back to the default, and there make them exit about again, until they have undertaken the first hunted Deer, then give them comfort by hollowing and Giblets, and so continue the chase till you have either set up the Deer or slain him, ever and anon having a watchful eye unto change: for it is the nature of a Deer, when he is once imboist or weary, to seek where he may find another Deer, and to beat him up and lay himself down in his place.

To know when a Stagge is weary, you shall see him imboist, that is, foaming and slavering about the Mouth with a thick white froath; his Hair will look black, shining and foul with sweat, and hee will rappish off, that is, he will ever and anon be lying down and lurking in dark holes and corners, and for his last

To know when a Stagge is weary.

Re-

Refuge hee will betake himself to the soyl; which is, hee will leap (if he can) into Rivers, Ponds, or other Water, out of which you shall force him either by art or strength: And thus much for the Chase or hunting of the Stagge.

Of the Buck.

Now for the hunting of the Buck: forasmuch as they are most usually kept in Parks, and that every Keeper, which is worthy to be a Keeper, may sooner from his own experience then from any Reading, get the experience of the ground he tendeth, and sith he is bound both by the Laws of Huntsmen and good manners, to give every man contentment, that is priviledged to hunt in his ground: And sith whosoever can hunt a Stag well, cannot hunt a Buck ill, the Red Deer being ever far more curious to hunt, then the Fallow, I will not spend any more time to write of it, but referre you to those Rules which are already Rehearsed.

Of the Hare.

Touching the hunting of the Hare, which is every honest Mans, and good Mans chase, and which is indeed the freest, readiest and most induring pastime, and likewise in it's own kind, full of good profit for Mans preservation: For though the Beast be but

Of the profits.

little, yet are the members worth injoyment, as the flesh, which is good for all manner of Fluxes; the Brains good to make children breed their teeth with ease; the Wooll excellent to staunch blood; the Gall sovereign for sore eyes; the blood which will kill Rheum, and Worms; the stifling bone, which being worn, taketh away the pain of the Cramp, with many other good things besides.

The Hunting
of the Hare.

Touching the hunting of the Hare, you are first to regard the place of hunting, as whether it bee in Woods or Champain: if in Woods, you shall not cast off your dogs in the thickest of the covert, but rather beat the bush close or shrubby ground near adjoining to the covert: for though in the Woods you may sooner find a Hare; yet commonly you shall find such change therewithal, that you shall hardly bring any forth worth your pleasure; where, on the contrary part, if you find any in those neighbouring grounds, she will presently fly forth into the champain: because naturally a Hare will refuse the covert, till shee begin to be weary; and a Hare being once heated, is not so easily lost,

Where to find
Hares.

lost, upon a fresh change, as when the scents are of equal coolness. If you hunt in the champain, you shall first beat those places which are most likely, as where Gorse or Whinnes grow, or in grounds that are all tusks of rushes, short ling, bramble bushes, or such like: or if the champain be more plain and void to such places, then you shall at the beginning of the year repair to the shrubs, about Christmas to the fallows, and in March to the green Corn; for those are the most usual haunts for the best Hares, and in all these places you shall regard the Form or Hares seat well, and know whether it be old or new, as if the Form be plain and smooth within, the pad before it flat and worn, and the pricles so new, and easie to be seen, that the earth appear black, and as it were presently broken, then is the Form new, and if the Hounds call upon it, then may you hunt from thence, and upon the trail recover that Hare: but if the Form look old and rough within, and the pad it self be not smooth, nor any pricks to be discerned therein, then it is old, and if the Hounds call upon it, you shall rate them, for the scent is old, and all the labour will be lost you spend upon it.

The knowledg
of the Hares
Form.

The next thing you observe must be the shifts and sleights of the Hare, when she is wearily hunted, as her doublings and windings, and at every default give the Hounds leisure enough and compass enough in the casting about of your rings for the unwinding of the same, then you shall observe her leaps and Skips before she squat, and beat all those places very curiously which are likely to give her any harbour, and though the loss seem never so dangerous, yet not to be discouraged, but to continue your search, because when she cometh to those hard shifts she is at the last cast, and cannot stand long before the Hounds. Many other circumstances there are, but they are so generally known to almost every man that any way affecteth this pleasure, that it is needless to make further relation thereof; and therefore I hold this sufficient for the hunting of the Hare.

The Hares
sleights and
shifts.

Now for the hunting of the Fox or Badger, they are chases of a great deal less use, or cunning then any of the former, because they are of much hotter scent, as being intituled stinking scents & not sweet scents, & indeed very few Dogs but will hunt them with.

The Hunting
of the Fox
or Badger.

with all eagerness; therefore I will not stand much upon them, but advise you to respect well their haunts and coverts, which commonly is in Woods and bushy places, and to take knowledge of their earths and Kennels, and as near as you can when you go about to hunt them, to stop up their Kennels, and keep them out that sling forth, that they may be sooner brought to their destruction; the chase is profitable and pleasant for the time, inasomuch as there are not so many defaults; but a continuing sport; yet not so much desired as the rest, because there is not so much art and cunning; and thus much for chases, and the general use of all kind of hunting.

The end of Hunting.



Of Hawking.

CHAP. V.

Of Hawking, with all sorts of Hawks, and the whole Art thereof.

IF your English Husband-man shall for his Recreation, chuse the pleasure of Hawking, which is a most Princely and serious delight; he shall understand that all Hawks are divided into two kinds, the long winged Hawk, and the short: the long winked Hawks which are meet for our Husbandmans recreation, are the *Faulcon gentle*, and her *Tercel*; the *Gerfaulcon* and her *Genkin*; the *Saker*, the *Lanner*, the *Barbary Faulcon*, the *Merlin*, and the *Hobby*: and the short winged Hawks, are the *Goshawk*, the *Tercel of the Goshawk*, the *Sparrowhawk*, and the *Musket*.

Kinds of
Hawks.

The *Faulcon gentle*, which is the principall of *Hawks*, may be made either for the field or river, and will fly at the Partridge, or at the Mallard; the *Gerfaulcon* will fly at the Herron; the *Saker* at the Crane or Bittern; the *Lanner* will fly at the Partridge, Pheasant or Chooße; the *Barbary Faulcon* at the Partridge only; the *Merlin* and the *Hobby* at the Lark, or any small Bird whatsoever; the *Goshawk* or *Tercel of Goshawk*, at the Partridge, Pheasant or Hare; the *Sparrowhawk* at the Partridge or Black-bird, and the *Musket* at the Bush only; and all these Hawks are hardy, meek, and loving to the man.

The flight of
Hawks.

The manning
of Hawks.

All Hawks generally are manned after one manner, that is to say, by watching and keeping them from sleep, by a continuall carrying them upon your fist, and by a most familiar stroaking and playing with them, with the wing of a dead fowl, or such like, and by often gazing and looking them in the face, with a loving and gentle countenance, and so making them acquainted with the man.

Of Luring
Hawks.

After your Hawks are manned, you shall bring them to the Lure by easie degrees, as first, making them jump unto the fist, after fall upon the Lure, then come to the voice, and lastly, to know the voice and Lure so perfectly, that either upon the sound of the one, or sight of the other, she will presently come in, and be most obedient; which may easily be performed, by giving her reward when she doth your pleasure, and making her fast when she disobeyeth: short-wing'd hawks shall be called to the fist only, and not to the Lure; neither shall you use unto them the loudnesse and variety of voice, which you do to the long winged Hawks, but only bring them to the fist by chirping your lips together, or else by the whistle. And in this manner of Luring, and calling of hawks, (for short-winged hawks are said to be called, and not Lured) you shall especially acquaint your hawk with three things: First bo'dnesse and acquaintance with men, dogs and Horses; then that she be eager and sharp set before the Lure be shewed her, knowing both the morning and evening hours of her luring; and lastly, to delight her the more with the Lure, to have it ever garnished on both sides with warm and bloody meat.

The Bashing
of Hawks.

When your Hawks are throughly manned and lured, and are come to the height of flesh and good lust, you shall then spy out a fair day when the weather and aire is most temperate, and carry your hawk to some fair, little, shallow, sandy, running brook, or Randle, where the water is quiet and still, and where your hawk may stand up to the mid thigh therein, and having prickt her down, and made her fast hard by the verdge thereof, you shall take off her hood, and go a little way from her and see whether she will bathe therein; but if you find her fearful of the water, you shall with a little slick paddle in the water a while.

b. fore

before her, and then depart from her again; and let her then bathe therein as long as she pleaseth: this done, you shall take her upon your fist, and give her a bit or two of meat, then hold her in the Sun, and let her pick, prune, and dry her self again: if you cannot come to any River, Brook, or Rundle conveniently, then you shall provide either a large bason, or a broad, shallow tub, and so in it let your hawk bathe as oft as occasion shall serve, for this bathing giveth a hawk courage, boldnesse and a great appetite, and would commonly be used the day or morning before any flight: If it be in the winter that your hawk batheth, when no Sun shineth, you may then dry her as well by the gentle air of the fire as otherwise.

To enscame your Hawk, which is to cleanse her from greafe, fat and glut, which lieth inwardly in her body, and which you shall know by her round thighs, her flesh, and full mewtings; then when you feed her in the morning, give her a bit or two of hot meat, and the night following little or nothing; then morning and evening, feed her upon the flesh of a Rook washt in two waters, till you feel the pinions of her wings more tender then they were before, then give her casting according to her nature, as was before shewed, and once in two or three dayes give her a hens neck well jointed and washt in water, which will by the sharpnesse thereof break the kels and filmes of fat which are in her body; then every morning you shall give her a quick train Pidgeon, and keep her so long upon her wing, that by her own moderate exercise, she may melt and dissolve the greafe that molesteth her; which after it is broken, you may take away, by giving her three or four pellets of the root of Sellandine, as big as garden pease, well washt and scoured; and if you steep those pellets in the syrup of Roses, the scouring is much stronger.

Of enscaming,
giving, casting
and scouring.

When your Hawk is manned, lured, and enscamed, you shall then bring her to her flight, which if it be at the Pheasant or Partridge in woody and close grounds, then you shall when you lure the hawk, cast your lure into some low Tree or Bush, that thereby you may bring her to take the stand; which when she doth, you shall then draw out your lure, and giving her notice thereof, make her seize thereon, and ever feed her on

Of flying at
the Pheasant
or Partridge.

the ground, and under a bush, the practice whereof will bring her to delight in the stand, and to mark all the advantages which she shall get from thence; then bringing her to either Pheasant or Partridge, make her fly at a young one first, that being more foolish and easier slain, she may take delight in her conquest. But if you fly any long winged Hawk in the champain, then you shall by all means possible keep her from the stand, and only maintain her upon her wing, till you spring the Partridge underneath her, and then stooping upon the advantage, the prey can hardly escape her: yet for the more sure killing of the game, and entring of young Hawks, you shall first spring the Partridge and mark them, then being come to the mark, cast off your Hawk, and when she is gotten to the height of her gate, lay in your Spannels, and then retrieving the Partridge underneath her after the first flight, it is impossible she should escape: And in this sort you may fly all manner of long-winged Hawks, for it is not proper to flie them from the fist, although most of our late Faulconers now adays use it; but for your short-winged Hawks, you shall fly them from the fist only: And therefore, to make them hardy and valiant, you shall first enter them at an old field Partridge, laid in a hole, and covered either with a sodde, board or hat, at which you shall fasten a small Creance, and then uncoupling your Spannels, as they are ranging about, suddenly, when your Hawks head is towards the Partridge, pluck off the sodde or hat, and let the train go, and the Hawk after it, which assoon as she hath slain, reward her very well, and thus doing twice or thrice, you may after venture to fly her at pleasure.

Of flying at
fowls.

To make your Hawk fly at fowl, which is called the flight at the River, you shall first whistle off an approved well quarried Hawk that is a sure killer, and let her enew the fowl so long, till she bring it to the plunge: then take her down and reward her, and set her by, yet so as you may have her ready to use at your pleasure: then whistle off your young Hawk, and when she is at the height of her gate, and that you have shewed her waters divers times to make her the more inward, and by a gibbet called her in, when at any time she hath looked out: Then being just over the fowl, make in with all your company on every side the River,

River, and so lay forth the fowle, which if your hawk stoop, strike, and truss, you shall presently make into her, and help her, and then crossing the fowles wing, or breaking them, let your Hawk take her pleasure thereon; but if she do not slay the fowle at the first stooping, then you shall give your Hawk pleasure to recover her gate again, and then lay forth the fowle as before, not leaving thus to do till you have landed it, and that the Hawk hath slain it, and then reward her as aforesaid: But if such a mischief shall fall out that the fowle do escape and break away; then you shall be sure to have a little Mallard ready in your bag, which you may cast forth, and so reward your Hawk thereon.

If your long winged Hawk flying at the River, or in champaign fields, use to take stand, which is a foule fault, you shall first by all means shun flying near Trees or Covert: but if that do not suffice, then you shall have divers trains in divers mens hands, and when the Hawk offers to go to the stand let him which is next her cast out his train, and she kill it, reward her this doing once or twice will reclaim her or nothing.

Helps for faults in long winged Hawks, and first of the stand.

If your Hawk through pride of grease or otherwise, be forward and coy, you shall not when she kills reward her as you were wont, but conveying some other cold meat cunningly under her, let her take her pleasure thereon, and ever with the meat give her some feathers which may scower her, and make her to cast, for this will recover her stomach, and make her more careful and diligent.

Against forwardness.

If your Hawk be of a wild and stirring nature, and will not look inward towards the man with her head, but take and gaze after every check, neither respecting whooping or gibbeting, in this case you must follow her and lure her back, and as soon as she turneth in her head, shew her the lure, to which if she stoop, then presently reward her; and thus do so oft as she rangeth, till she be brought unto that Love to your voyce and affection to the Lure, that she will forget her other extravagant thoughts.

To make a hawk look inward.

When your Hawk is brought to fly to an extraordinary high pitch, to maintain and keep her in the same manner of flying still, you shall not flie her above one flight in a day at the most.

for

for nothing bringeth her down more then over wearinesse: Also you shall not then keep too extream a straight hand upon her, for too much greedinesse of the Quarry makes her slack her flying. Also you shall not flie her upon Rundles, or small brooks, but upon plashes and broad Rivers; you shall not suffer her to flie too long, but after two or three stoppings, and a crossing, although she misse it, take her down with the Lure or train, and reward her, for this encouragement will maintain her in her goodnesse.

To bring
hawks upward

If your hawk be high flying, yet sloathfull to go to her Gatte, or else now and then stooping before there be cause, and so losing her way, which many times happeneth when either the hawk is kept too sharp, or flown out of her due time; any of which faults when you perceive, you shall then upon the doing thereof give her a dead Quarry, and then hood her up without reward, and an hour or two after, call her to the Lure, and feed her; and thus do as oft as she offendeth: yet for the more sure prevention thereof, I would have every Faulconer to try the naturall disposition of his hawk, and find whether she flyeth better on a streight hand, or an open, and whether early or late, and so forth, and according to her own nature, ever to keep her.

Faults in short
winged hawks,
first of turning
tayl.

Short winged Hawks, as *Goshawks* and *Sparrow-hawks*, will many times neither kill their Game, nor flie their Game to mark, but will give it over after a little flying, and (as Faulconers term it) turn tail to it, which when you see, you shall incourage your dogs to hunt and cast before your Hawk a train Partridge, as it were the wild one, and make her seize it, and feed well upon it, to encourage her the better, and thus do twice or thrice, which if you see prevail not, then esteem her not, but make her away, for she will hardly ever be reclaimed.

If a Hawk will
not flie at all.

Hawks that have never been acquainted with prey, will many times not flie at all; but taking a tree, will sit and look after the game, which fault to amend, you shall feed ever her upon quick Birds, and make her foot them, and then going into the field, which is champaine and plain, after you have rid up and down a pretty space with the hawk unhooded, you shall cause one of your company to cast out a field Partridge before your Hawk. Then

let her flie at it, and so soon as she hath footed it, let her feed thereon at her pleasure, and do thus three or four times, till she be well in blood, and you shall find her valiant quickly.

If your hawk be so fond of the man, that she will not flie from him, but after a stroke or two, return to him again; you must then Too much fondnesse of the man. but seldom be familiar with her, and let her rather feed her self then be fed by you, and as oft as she cometh so improperly unto you, you shall give her no reward; but when she forsaketh you, and killeth the game, then you shall well reward her, and then make her both familiar with men, dogs, and horses; for to take joy or dislike to any of them, is a mischief a great deal worse then the former.

To speak of the mewing of long winged hawks, you shall Mewing of long winged Hawks. understand that she may be set down, that is, put into the mew about the middle of *April*, at which time if you find they have

any lice, you shall pepper them, and put them into the Mew, which if it be a low place upon the ground free from noise, vermine, or any evil air, then it is called mewing at the stone or stock, but if you mew in any high room with open windowes towards the *North*, or *North-East*, then it is called mewing at large:

If you mew at the stock, you shall have a broad Table in Mewing at the stock. the midst of the room, on which you must place sand, gravel, stone,

sods, and rubs for water, and in the midst of these a free-stone or block of two foot high, to which you shall fasten your hawk with a turvell of Iron, so that at no time her leafe may be intangled: this manner of mewing may be in the Faulconers own

bed-chamber, or in any other safe room at his pleasure; the best meat in the mew is any quick birds or fowl, dogs flesh, and such like: If you mew your hawk at large, you shall put her loose in-

to the mew, having sundry pearches therein, some high, some low for her use to sit on; and in this mew also you shall have sand, stones, gravel, green sods, and water, all which you shall renew as oft as need do require, and in the midst of them a block or two, whereon to tie her meat, which meat shall be the same formerly spoke of, and given at certain and due times, without fail or alteration.

If you intend to mew a short winged hawk, as the Goshawk, or such like, you shall in *March* after you have scowred her, and made:

made her clean from lice, cut off her the lesse, and throw her into Mew loose, either in a high room or a low room at your pleasure; let her Perches be lined with canvasse, or with woollen list for the safety of her feet; let her have store of water for bathing, and oile renewed, and store of meat, as live Pigeons, warm Mutton, warm Goat, or Dogs-flesh, any of which will make her mew quickly.

When to draw
hawks.

Hawks for the field would be drawn from the mew in *June*, and made ready to flie in *August*, at which time Corn is cur, and Game is strong: and hawks for the River would be drawn in *August*, that they may be ready to flie in *September*.

Diseases in
hawks.

Hawks have divers infirmities and diseases, as Feavers, Palsey, Impothumes, sore eyes, and Nares, Megrims, Pantas, casting her Gorge, foulness of Gorge, Worms, Fillanders, ill Liver, or Gout, Pinne in the foot, breaking the pounce, Bones out of joynt, Bones broken, Bruises, Lice, Colds, Frounce, Fistulae, Stone, much gaping, more foundring, privy evil, taint in the Feathers, loss of appetite, broken wind, blow on the Wing, wounds, swelling, eating their own feet, taking up of veins in Hawks, Cramp, and a world of others: all which so far as I have shewed the Medicines, and cures thereof in the former Treatise called *Cheape and Good*, I will refer you unto the same, and not doubt but it will give you satisfaction.

CHAP. V I.

Of Coursing with Grey-hounds, and the Excellencies of that Sport.

Of coursing
with Grey-
hounds.

NOW if the mind of our Husbandman be not so generally taken with the delight and pleasure of this recreation of Hawking, but that he preferreth before it the delight of Coursing with Grey-hounds, which is a very noble and worthy pastime, he shall in it observe these four things, the Breed of Grey-hounds, their shape, their diet, and the Lawes belonging to the same.

Breeding of
Grey-hounds.

Touching the breed of Grey-hounds, you are principally to respect the Countries in which they are bred, and nourished

rished, as that it be a Champion Plain, and without covert, where a Hare may stand forth, and endure a course of two miles, or more, as it shall happen (for the coursing of a hare is that which I purpose most to treat of) because in a close Country full of covert, where a hare cannot run above a quarter of a mile, or less, both the pleasure of the recreation is taken away, and the Grey-hound by an insufficient exercise is made unapt, and unfit for that for which he was created.

Now of Champion Countries, they are of three kinds, as the Best places for low Valleys, such are the Valleys of *Belvoir*, the Vale of *White-Horse*, the Vale of *Evesham*, and such like; the high Downs and Heaths, as about *Salisbury*, *Gloucester*, *Lincoln*, and many such like places; and the middle between both, as the Country of *Northampton* and *Leicester*, and other like them: All which are very The best excellent places for the breeding and training up of the best Grey-hounds.

Grey-hounds; yet of the three your Valleys or middle soyles, which for the most part are arable Grounds, are much better to breed and train on, then your Downs and Heaths, because they are much more labourfome, rough, heavy, and the Winter season full of much trouble and false foot-hold, insomuch, that a dog which is able to run strongly, swiftly, and surely there, must necessarily do it ten times better when he comes to the smooth, plain, and carpet-like down: where on the contrary, the dogge which is trained upon those even Downs, though he be right famous and excellent, when he comes to run in the deep well plowed Field, is to seek where to bestow his feet, and can neither shew speed, cunning nor endurance.

Now the Gentlemen which dwell on the Downs and plain Grounds, to maintain the reputation of their dogs, affirm them to be much more nimble and cunning in turning, then the Vale dogs be, because the fairness of the Earth giveth them so much advantage over the hare, that having her even (as it were) in a manner under their feet, she is put more to her shifts, and strives with greater art of sleights to deceive, and get advantage of the Greyhound. And it is true, for by reason of the advantage of their Hills, which are great and steep, though smooth and plain, I have seen a Vale-dog so much deceived, that upon a turn, he hath lost more ground then hath been recoverable in the whole course.

Nimbleness in Grey-hounds.

course after : but there is no want of goodnes, a little skill, which a moneths courling will bring a dog to sufficiently unto, that he will not need any other reformation, then the knowledge of his error, by his loss of labour. So that I conclude the good dog upon the deeps, will ever beat the good dogs on the plain.

Difference between Dogs and Bitches.

It is an old received opinion amongst many men of the Leash, that the Grey-hound Bitch will ever beat the Grey-hound dog, by reason of her more nimbleness, quickness and agility : And it is sometimes seen, that a perfect good Bitch indeed, hath much advantage of an ordinary dog : but if the good dog meet with the good Bitch, there is then no comparison but the dog will be her Master, in as much as he exceedeth her both in length and strength, the two main helps in courling : for her nimbleness is then no help : sith a good dog in the turn, will lose as little ground as any bitch whatsoever.

Dogs and Bitches for breed.

Yet thus much I would perswade all Gentlemen of the Leash to be very careful in their breeding, to breed upon the best Bitches they can provide : for it is found in experience, that the best dog upon an indifferent Bitch, will not get so good a whelp as an indifferent Dog upon the best Bitch. And amongst these Observations in breeding Grey-hounds, you shall observe to have your Dogs and Bitches of equal and indifferent ages, as about three or four years old as the most : but in case of need, your Bitch will endure a great deal longer then your Dog, and to breed with a young dog, or an old bitch, may bring forth an excellent Whelp.

The shapes of Greyhounds.

Touching the shapes of Grey-hounds (from whence you shall take the best collections for their goodnes) they are certain and most infallible : Therefore touching Grey-hounds, when they are Puppies or young Whelps, those which are most bon'd, lean, loose made, sickle or crooked bonght, and generally unknit in every member, are ever likely to make the best dogs, and most shapely : but such as in the first three or four moneths are round, and close trust, fat, straight, and as it were full sum'd and knit in every member, never prove good, swift, or comely.

Now after your dog comes to full growth, as at a year and a half, or two years old, he would then have a fine long lean head,

head, with a sharp nose, rush grown from the Eye downward : A full clear eye with long Eyelids, a sharp ear, short and close falling, a long neck a little bending, with a loose hanging wand, a broad breast, strait forelegs, side hollow, ribs straight, a square and flat back, short and strong fillets, a broad space between the Hips, a strong stearn or tayl, and a round foot, and good large clefts. Now for the better help of your memory, I will give you an old rime left by your fore Fathers, from which you shall understand the true shapés of a perfect Grey-hound, and this it is,

*If you will have a good tike,
Of which there are few like,
He must be beaded like a snake,
Neck like a Drake,
Back like a beam,
Sided like a Bream,
Tayled like a Rat,
And footed like a Cat.*

These being the principal members of a good Grey-hound, if they resemble the proportions of the things above named, the dog cannot choose but be most perfect.

When you have thus a perfect and well shap'd Grey-hound, your next rule is to apply yourself to the dyeting and ordering of him, for the pleasure to which you keep him; that bringing him to the uttermost height or strength of wind, you may know the uttermost goodness that is within him, which disorderly and foul keeping will conceal, and you lose a Jewel for want of knowledge of the value.

Dyeting of
Grey-hounds
to course.

Dyeting then of Grey-hounds consisteth in four especial things, to wit, food, exercise, ayting and kennelling; the first nourishing the Body, the second the Limbs, the third the Wind, and the last the Spirits.

Of what die-
ting consisteth.

To speak then of food, it is two-fold, either general, or particular : general as for a continual upholding and maintaining of a dog in good state of body, being in good plight and liking; or particular, when a dog is either poor, sick, or prepared for wa-

Of food.

Of general
food.

ger. standeth in need of particular foods of advantage.
The best general food for the ordinary upholding of a Dog in a good state is, chippings, crusts of bread, soft tender bones or grissels of Veal, Lamb, or such like, first scalded in Beef-broth not very salt, or other broaths in which hath been boyled Mutton, Veal, or Venison, or any kind of Pullen; or for want thereof, other clean scalding water. After your chippings or bread is scalded, you shall let it stand and cool, then when your feeding hour cometh, you shall take as much good milk, flotten milk, or butter-milk (but the best is most wholsome), as will fully or more then whiten the same: for it is to be intended, that your water must be all drunk up into your bread, and your milk must only make it swim, and with this feed your dog morning and evening after you come from walking him, and give him a good and sufficient meal thereof, for this will only maintain, and uphold him in good state of body, being strong and lusty in flesh before.

Of particular
food.

For particular food, which is when a dog is poor, sick, or to be prepared for a wager, they be these: First, if he be poor in flesh, sickly or weak, the best food you can raise him up withall, is to take sheeps heads, wooll and all, clean washt, and break them all to pieces, then put them into a Cauldron or Kettle, and after the water hath risen, & is clean scum'd, put unto it good store of Oatmeal and sweet pot-herbs small chopt together, & so boyl it till the flesh be tender; then with this meat and the pottage feed your Grey-hound morning and evening, and it will soon put him into great lust & strength: but if you will prepare him for match and wager, then you shall make him this diet-bread: Take a peck of the finest and dryest Oatmeal, and two pecks of good Wheat; and having ground them together, bould the meal through a fine boulding cloath, and then scattering amongst it a pretty quantity of Annis-seeds and Licoris well beaten together, knead it up with the whites of Eggs, new Ale and Barm mixt together, and so bake it in pretty round loaves reasonable hard: with this bread either scalded, as was before shewed in your chippings, or put into the pottage with sheeps heads warm, feed your dog morning and evening, to wit, half an hour after

Food for a
match.

Hours of feed-
ing.

Sun-

Sun-rise, and half an hour before Sun-set, when you come from walking or airing him, and it will bring him to exceeding great strength of body, and puenesse of wind.

For the exercise of your Greyhound, it consisteth likewise in two things, coursing and airing; and they be every way as necessary as is food, because it only bringeth ability to his limbs, and peritnesse to his wind: To speak then of coursing, you shall not faile to course him at least twice a week, if your courses be strong and long: but thrice a week if they be but reasonable, as a mile, or a mile and a half at most; and sometimes if your courses be short, under a mile. In coursing you shall observe two things, blood and labour; blood, which is a heartning and animating of your dog to delight in the pleasure, when he finds the reward of his pain taking; for if a dog course continually, and never kill the hare, the sport will grow irksome unto him, and therefore now and then give him such advantage, that he may kill the hare: then labour, which is contrary to killing; for in it you must give the hare all different advantage both by Law and otherwise, whereby he may stand long before the dog, and make him shew his uttermost strength before he be able to reach her.

Of exercise by coursing.

After your dog hath coursed, if he kill, you shall by no means suffer him to break the hare; but having taken her from him, first cleanse his mouth and chaps from the wool of the hare, and then give him to eat, the Liver, Lights, and heart, and so take him up in your leash, lead him home, and there first wash his feet in a little butter and beer, and so put him up in the kennel, and half an hour after feed him; for upon his coursing dayes, you must by no means give him any meat more then a white-bread toast and butter, or a toast and oyle, which must be given before his morning ayring; and so kennelled till he go to his course.

Of ordering dogs.

Touching ayring or walking of Grey-hounds, which is a great nourisher and encrease of wind, it must duly be done every morning before Sun-rise, and every evening before or after Sun-set, in this manner: as soon as you have opened your kennel, and rubb'd your dog over with a clean hair-cloth, you shall let him play a little about you, before the kennel door, then take

Airing after coursing.

take him up in your leath and walk him forth into the field, where for the most part are not sheep or other small Cattel, which they may out of wantonness indanger, and there let him lose, and give him leave to play and scope about you, so that he may skummer, piss, and empty his body; which when he hath done sufficiently, you shall then take him up in the leath again, and so walk him home and kennel him; this you shall do after the same manner in the Evening; and also if your Dog be strong and lusty at night after Supper, and then bringing him home bring him to the fire, and there let him stretch and beak himself, and with your hand grope and cleanse him from ticks, and other filth; which done, lead him to the kennel, and shut him up for all night.

Of kennelling
the Grey-
hound.

Now for the kennelling of Greyhounds, it is a right necessary action, and must be performed with all diligence, for it breeds in dogs, lust, spirit and nimbleness, prevents divers mischances, and keeps the powers from spending, till time of necessity: and therefore you shall by no means suffer your dog to be out of the kennel but in the hours of feeding, walking, courting, or when you have other necessary businesses to do about him.

CHAP. VII.

The Lawes of the Leash or Courting, as they were commanded, allowed, and subscribed by Thomas late Duke of Norfolk, in the Reign of Queen Elizabeth.

NOW lastly touching the Lawes of the Leash, or courting, though they be uncertainly received, and alter with many various opinions, yet these under-written were held for authentic once, and invented, received and subscribed unto by many noble and worthy Personages, fitting fully with the Reasons and Grounds of the pastime.

First therefore it was ordered, That he which was chosen Fencer, or letter-loose of the Grey-hounds, should receive the Grey-hounds match to run together into his Leash as soon as he came into the field, and to follow next to the Hagle-hinder till he came unto the Form; and no horsemen nor footmen, in pain of disgrace,

disgrace, to go before them, or on either side, but directly behind, the space of forty yards, or thereabouts.

Item, That not above one brace of Grey-hounds do course a Hare at one instant.

Item, That the Hare-hinder should give the Hare three low bows before he put her from her Lear, to make the Grey-hounds gaze and attend her rising.

Item, That the Fewterer shall give the Hare twelvewyre Law, or he loose the Grey-hounds, except it be in danger of losing sight.

Item, That dog that giveth the first turn, if after the turn be given, there be neither coat, slip, nor wench extraordinary, then he which gave the first turn shall be held to win the wager.

Item, If one dog give the first turn, and the other bear the Hare, then he which bore the Hare shall win.

Item, If one dog give both the first turn and last turn, and no other advantage between them, that odd turn shall win the wager.

Item, That a coat shall be more then two turns, and a go-by, or the bearing of the hare, equal with two turns.

Item, If neither dog turn the hare, then he which leadeth last, at the covert, shall be held to win the wager.

Item, If one dog turn the hare, serve himself, and turn her again, those two turns shall be as much as a coat.

Item, If all the course be equal, then he only which bears the hare shall win; and if she be not born, then the course must be adjudged dead.

Item, If he which comes first into the death of the hare, takes her up and saves her from breaking, cherisheth the dogs, and cleanseth their mouths from the wooll, or other filth of the Hare, for such courtesie done, he shall in courtesie challenge the Hare, but not doing it, he shall have no right, priviledge or title therein.

Item, If any dog shall take a fall in the course, and yet perform his part, he shall challenge advantage of a turn more then he giveth.

Item, If one dog turn the Hare, serve himself, and give divers coats, yet in the end stand full in the field, the other dog without

out turn giving, running home to the covert, that dog which stood still in the field, shall be then adjudged to lose the wager.

Item, If any man shall ride over a dog, and overthrow him in his course (though the dog were the worse dog in opinion) yet the party for the offence, shall either receive the disgrace of the field, or pay the wager, for between the parties; it shall be adjudged no course.

Item, Those which are chosen Judges of the Leash, shall give their judgments presently before they depart from the field, or else he, in whose default it lyeth, shall pay the wager by a general voice and sentence.

And thus much for the Lawes of Coursing, and those particularities which do depend thereupon: All which I submit unto the correction and amendment of those Worthy and well-knowing Gentlemen, who having the Office of the Leash conferred upon them, have both Authority and Power to make Lawes therein, according unto the Customs of Countries, and the Rule of Reason.

The End of Hunting.



Of Particular Recreations.

CHAP. VIII.

Of divers other particular Recreations.

THere be many other particular Recreations necessary for the knowledge and practice of our Husbandman; As first, Shooting in the Long-bow, which is both healthful for the Body, and necessary for the Common-wealth: the first, extending the Limbs, and making them pliant: the other enabling strength fit to preserve and defend his Country. And first, for shooting in the Long-bow, a man must observe these few Rules, first, that he have a good Eye to behold and discern his mark, a knowing judgment to understand the distance of ground, to take the true advantage of a side-wind, and to know in what compass his Arrow must flye, and a quick dexterity to give his shaft a strong, sharp and suddain loofe: he must in the action it self stand fair, comely, and upright with his body, his Left foot a convenient stride before his Right, both his hammes stiff, his left Arm holding his Bow in the midst stretcht straight out, and his Right Arm with his three first fingers and his thumb drawing the string to his right Ear, the notch of his arrow setting between his fore-finger, and long finger of his right hand, and the feal of his Arrow below the feathers upon the

Of shooting
in the Long-
bow.

G g

middle

middle knuckle of his fore-finger on his left hand, he shall draw his Arrow up close unto the head and deliver it on the instant without hanging on the string; the best Bow is either Spanish or English Yew, and the worst of Withen or Elme; the best shaft is of Burch, Sugar-chest, or Brazel; and the best feathers gray or white.

The Marks to shoot at three, Butts, Pricks, or Rovers: the Butt is a Jewell Mark, and therefore would have a strong Arrow with a very broad Feather: The Prick is a Mark of some compasse, yet most certain in the distance, therefore would have nimble strong Arrows with a middle feather, all of one weight and flying: the Rover is a mark uncertain, sometimes long, sometimes short, and therefore must have arrows lighter or heavier, according unto the distance of place.

Of Shooting
in Crosse-
bowes.

If infirmity in the Arm, or Back, take from a man the use of the Long-bow, he may then with a Crow-bow made for gasel carried upon a string, and the neather end placed in a rest, with arrowes made strong, heavy, and suitable to the strength of the Bow, shoot at all the former Marks, and reap the same pleasure he formerly did with his long bow.

Of bowling.

There is another Recreation, which howsoever unlawfull in the abuse thereof, yet exercised with moderation, is even of Physicians themselves held exceeding wholesome, and hath been prescribed for a Recreation to great Persons, and that is bowling, in which a man shall find great Art in choosing out his Ground, and preventing the Winding, Hanging, and many turning advantages of the same, whether it be in open wide places, or in close Allies: And in this sport the choosing of the Bowl is the greatest cunning: your flat bowls being the best for close Allies: your round byassed Bowls for open grounds of advantage, and your round bowls like a ball, for green swarths that are plain and level.

Not inferiour to these sports, either for health or action, and the Tenise, or Baloon; the first being a pastime in close or open Courts, striking a little round ball to and fro, either with the palms of the hand, or with Racket. The latter a strong and moving sport, in the open field, with a great ball of a double Leather

fill'd

fill'd with wind; and so driven to and fro with the strength of a mans Arm, arm'd in a bracer of wood; either of which actions, must be learnt by the Eye and practise, not by the Ear or Reading.



Of Angling, &c.

CHAP. IX.

The whole Art of Angling; as it was written in a small Treatise in Rime, and now for the better understanding of the Reader put into Prose, and adorned and enlarged. And first of Angling, the Vertue, Use and Antiquity.

SINCE Pleasure is a Rapture, or power in this last Age, stoln into the hearts of men, and there lodged up with such careful guard and attendance, that nothing is more Supreme, or ruleth with greater strength in their affections; and since all are now become the Sons of Pleasure, and every good is measured by the delight it produceth: what work unto men can be more thankful then a discourse of that pleasure which is most comely, most honest, and giveth the most liberty to Divine Meditation? and that without all question is the Art of Angling, which having ever been most hurtlesly necessary, hath been the sport or Recreation of Gods Saints, of most holy Fathers, and of many Worthy and Reverend Divines, both dead, and at this time breathing.

For the use thereof (in its own true and unabused nature) The use of Angling.

rieth in it neither covetousness, deceit, nor anger, the three main spirits which ever (in some ill measure) rule in all other pastimes: neither are alone predominant without the attendance of their several hand-maids, as Theft, Blasphemy, or Blood-shed: for in Dice-play, Cards, Bowls, or any other sport where money is the goal to which mens minds are directed, what can mans avarice there be accounted other then a familiar Robbery, each seeing by deceit to couzen and spoyle others of the blisse of meanes which God hath bestowed to support them and their families. And as in every contention there must be a better-hood or super-excelling: so in this, when the weaker deceit is deprived of his expectation, how doth it then fall into Curses, Oaths, & furies, such as would make Vertue tremble with the imaginations?

But in this Art of Angling there is no such evil, no such sinful violence, for the greatest thing it coveteth, is for much labour a little Fish, hardly so much as will suffice Nature in a reasonable stomach: for the Angler must intice, not command his reward, and that which is worthy millions to his contentment, another may buy for a groat in the Market. His deceit worketh not upon men, but upon those Creatures whom it is lawful to beguile for our honest Recreations or needful use; and for all rage and fury it must be so great a stranger to this civil pastime, that if it come but within view or speculation thereof, it is no more to be esteemed a pleasure: For every proper good thereof in the very instant faileth, shewing unto all men that will undergo any delight therein, that it was first invented, taught, and shall for ever be maintained by Patience only. And yet I may not say, only Patience; for her other three Sisters have likewise a commanding in this exercise, for Justice directeth and appointeth out those places where men may with liberty use their sport, and neither do injury to their Neighbours, nor incur the censure of incivility. Temperance layeth down the measure of the action, and moderateth desire in such good proportion, that no Excess is found in the over-flow of their affections. Lastly, Fortitude enableth the Mind to undergo the travail and exchange of Weathers, with a healthful ease, and not to despair with a little expence of time, but to persevere with a constant imagination in the end, to obtain both pleasure and satisfaction.

Now.

Now for the Antiquity thereof (for all pleasures, like Gentry, are held to be most excellent, which is most ancient) it is by some Writers said to be found out by *Deucalion* and *Pyrrha* his Wife, after the general Flood. Others write, It was the invention of *Saturn*, after the Peace concluded betwixt him and his Brother *Titan*: And others, That it came from *Belus* the Son of *Nimrod*, who first invented all holy and vertuous Recreations. And all these though they savour of fiction, yet they differ not from truth, for it is most certain, that both *Deucalion*, *Saturn*, and *Belus* are taken for figures of *Noah* and his Family, and the invention of the Art of Angling, is truly said to come from the Sons of *Seith*, of which *Noah* was most Principal. Thus you see it is good, as having no coherence with evil: worthy of use, in as much as it is mixt with a delightful profit: And most antient, as being the Recreation of the first Patriarchs; Wherefore now I will proceed to the Art it self, and the means to attain it.

CHAP. X.

Of the Angle-Rod, Lines, Corks, and other tools for Angling.

IN as much as the first Ground-Work or Substance of this Art of Angling consisteth in the implements belonging and appertaining thereunto, and that except a man be possesst of them which are most exact, nimble or necessary for the same, his labour is vain, and to little or no purpose employed, and for as much as the Angle Rod is the greatest, principallest, and sole Director of all other Tools belonging thereunto, I think it not amiss to begin with the choyce and order thereof, according to the opinions of the best noted Anglers, which have been in times past, or are at this day living.

For the choyce then of your Angle-Rod, you shall understand that some Anglers are of opinion, that the best should be composed of two pieces, a main body, and a small pliant top. The Main body would be of a fine grown ground Witchin, or a ground Elme, of at least nine or ten foot in length, streight, smooth, without knots, and not much differing at either end in

one

one substance or thickness. It would be gathered at the fall of the leaf, near or about *Al-habontide*, and laid up in some dry place, where it may lye straight, and of it self season: For to beak them in the fire (as many do, when they are green, is not so good; but after they be well dried and seasoned of themselves, then to beak them in the fire, and set them so straight and even that an arrow cannot surpass them, is excellent; then you may take off the upper rind, and what with the smok, and their own age, their colour will be so dark, that they will give no reflect into the Water, (which is a principal observation.) Your Rod being made thus straight and seasoned, you shall at the upper end thereof with an augur or an hot Iron (but a hot Iron is the better) burn a hole about three inches deep, and of a fingers widents: then on the cut-side of the Rod, from the top of the hole unto the bottome, you shall wrap it about either with strong double twisted thred well waxed or pitcht, or with Shoemakers thred many times doubled and well waxed with Shoemakers Wax, and the last end fastned under the last folds, or close and so sure, that it may by no means loose; for this will keep the Rod from cleaving or breaking in that same place where the hollownes was made.

Of the top of
the Angle-
Rod.

The stock being thus made, you shall into the hole fixe the Top, which would be a very small ground Hazel, growing from the Earth upward, very smooth and straight, which would be cut at the latter end of the year, and lye in season all the Winter, the upper Rinde being by no means taken off, neither the Rod put into the fire at all, but only seasoned in a good dry place, where it may lye straight, and have both the Wind and some Ayr of the Fire to come unto it. This Top must be pliant and bending, yet of such a sufficient strength, that it will not break with any reasonable jerk, but as it is any way bowed, so to return again to the former straightnesse. This top wand would be of a yard and a half, or an Ell at least in length, and at the smallest end thereof would be fastned with a warp of hair, or a strong loop of hair, about an inch long, to which you may at pleasure fasten your fishing line; and the bigger end of the top must be thrust into the socket of the stock, and made so fast, that it may

may not loosen nor shake out with any shaking or other reasonable violence. And albeit the Witchin or Ground Elme are accounted the best to frame these main stocks of, yet I have seen very good stocks made both of Sallow, Beech or Poplars, for the lighter your Rod is, (so it be strong) it is so much the better, and more for the ease of him that useth it.

There be other approved good Anglers which allow onely the Rod which is composed all of one entire piece, and think them stronger, nimbler, and lesse casual: and these Rods they would have chosen of an excellent streight and well-grown Ground Hazel, being from the bottome to the top finely Rush-grown, the upper end thereof being small, plyant and bending. This Rod should be gathered at the fall of the leaf, when the leaves are some fallen and some sticking: as soon as you have cut them up, you shall cut away the leaves and small sprigs, yet not so near that you hurt the bark (for that by no means must be stir'd, as well for the strength of the Rod, as for the colour, which being dark will not so soon catch the eye of the Fish and offend them.) Then bringing your Rods home, you shall lay them upon a level floor, and pressing them down with good weights, to keep them from warping, let them lye and season all the Winter: Then, in the Spring-time take them up for your purpose, which is only to make the knots smooth, and to fix your loop of hair unto the upper end. Now of these Rods, the longest is the best, so it be streight and well grown: for most commonly they are so short, that they will serve to fish with but in little narrow Brooks, or else in a Boat, in great waters.

The Angler-
Rod of one
piece.

There be other Anglers, and many of the best and approved judgment, which allow the Angler-Rod of many pieces: as those which are made of Cane: each piece exceeding another one degree, in such even proportion that being fixed and thrust one within another, they will shew as one even and most streight Rush-grown body, without any crookedness or other outward evil favouredness. These pieces would not be

The Anglers
Rod of many
pieces.

above:

above four foot in length apiece, and three such pieces, which make twelve foot, are sufficient for the stock of the Rod, besides the top. Now for those ends which are the sockets, into which you fix the other Canes, you shall hoop them about with fine plates of Brasse, an inch and an half broad, well sodered, and smoothly filed, which will keep the Cane from cleaving: and for the top of this Rod, the round Whale-bone is thought the best; and surely in my conceit so it is both for this or any other Rod whatsoever; for it is tough, strong, and most plyant. These Rods most commonly are made to have the small Canes thrust down into the wide Canes, so that a man may walk with them as with a staff, as when he pleaseth to draw them forth, and use them as occasion shall be offered. The onely Exception which is taken at these kind of Rods, is the bright colour of the Cane, which reflecting into the water, oft-times scares the Fish, and maketh them afraid to bite: But if you fish in deep and thick Waters, there is no such matter, for the shadow of the Rodde is not discerned through the Sun, onely in shallow and clear Brooks it is a little hindrance; and therefore he which is a Master in this Art, will timber and darken the Rod, by rubbing it over a gentle fire with a little Capons grease, and brown of Spain, mixt together.

Of the Lines.

Now for your Lines, you shall understand that they are to be made of the strongest, longest, and best grown Horse-haire that can be got, not that which groweth on his Main, nor upon the upper part or setting on of his tayl, but that which groweth from the middle and inmost part of his dock, and so extendeth it self down to the ground, being the biggest and strongest hairs about the Horse: neither are these hairs to be gathered from poor, lean and diseased Jades of little price or value, but from the fattest, soundest, and proudest Horse you can find, for the best Horse hath ever the best hair; neither would your hairs be gathered from Nags, Mares, or Geldings, but from ston'd Horses only, of which the black hair is the worst, the white or gray best, and other colours indifferent. Those Lines which you make for small fish, as Gudgeon, Whiting or Menew, would be composed of three hairs: those which you make for Peach or Trout, would be

be of five hairs, and those for the Chub or Barbel, would be of seven: To those of three hairs, you shall add one thread of silk; to those of five, two threads of silk; and to those of seven, three threads of silk. You shall twist your hairs neither too hard nor too slack, but even so as they may twind and couch close one within another, and no more, without either snarling or gaping one from another; the end you shall fasten together with a fishers knot, which is your ordinary fast knots, foulded four times about, both under and above, for this will not loose in the water, but being drawn close together, will continue, when all other knots will fail; for a hair being smooth and stiff, will yield and go back, if it be not artificially drawn together. Your ordinary line would be between three and four fadom in length; yet for as much as there are diversities in the length of rods, in the depth of waters, and in the places of standing to angle in, it shall be good to have lines of divers lengths, and to take those which shall be fittest for your purpose.

These lines, though the natural hairs being white or grey, be not much offensive, yet it shall not be amiss to colour them according to the seasons of the year, for so they will least scare the Fish, and soonest intice them to bite with most greediness; and of colours, the best is the water-green, which you shall make after this manner: Take a pottle of Allom-water, and put thereunto a great handful of Marigolds, and let them boil well, till a yellow scum rise upon the water, then take half a pound of green Coperas, and as much Verdigrease, beaten to fine powder, and put it with the hair into the water, and so let it boyl again a pretty space, and then set it by to cool for half a day, then take out your hair, and lay it where it may dry, and you shall see it of a delicate green colour, which indeed is the best water-green that may be. This colour is excellent to angle with in all clear waters where the line lies plain, and most discovered, and will continue from the beginning of the Spring, to the beginning of Winter. Now if you will have your lines of a yellow colour, you shall boyl your hair in Allom-water, mixt only with Marigolds, and a handful of Turmerick; but if you cannot get Turmerick, then you shall stamp so much of green Walnut-tree leaves, and mix

The colouring
of Lines.

it with the water, and your hair steep therein twenty and four hours at least.

Lines of this colour are good to Angle with, in waters that are clear, yet full of weeds, sedge, and such like: for it is not unlike to the stalks of these weeds, and it will well continue to Angle withall, the first part of the Winter, as from before *Michaelmas* till after *Christmas*.

If you will have your Lines of a russet colour, you shall take a part of Allom-water, and as much strong Lye, then put thereto a handful of soot, and as much brown of Spain, and after it hath boiled an hour or two, set it by to cool, and when it is cold, steep your hair therein a day and a night, and then hang it up to dry: these coloured Lines are good to angle with in all deep waters, whether they be Rivers or standing Pools, as Ponds, and such like, and are most in use from *Christmas* till after *Easter*.

Now if you will have your lines of a brown or dusky colour, you shall take a pound of *Umber*, and half so much soot, and seethe it in a pottle of Ale a good space, then when it is cold, steep your hairs therein a day and a night, and then hang them up to dry, and the colour will be perfect: yet ever the darker you would have it, the more *Umber* put unto it: These Lines are excellent to angle with in waters that are black, deep and muddy, be they either running or standing waters, and will continue all seasons of the year whatsoever, only in bright waters they are too black, and cast too large a shadow. Lastly, if you would have your Lines of a fawny colour, (although in the water it sheweth almost all one with the other dark colours) you shall take Lime and Water, mix it together, and steep your hair therein half a day, & then take it forth and steep it double so long time in Tanners ouze, and then hang it up to dry, and the colour will be perfect: these lines are best to angle with in Moorish and Heathy Waters, which are of a reddish colour, and will serve for that purpose all seasons of the year: if with this colour or the green, you mix a silver thread, it will not be amiss: and with the other colours, a gold thread is good also. And note, That at each end of your line, you make a loop, the one to fasten to the top.

top of your Rod, being the larger; and the other to fasten your hook-line unto, which would be somewhat lesser.

After your Lines be made, you shall make your Cork in this manner; Take of the best and thickest Cork you can get, and with a fine Razor having pared it smooth on the outside, cut it in to the fashion of a long Katherine Pear, big and round at the one end, and long and slender at the other, and according to the strength of your Line, so make your work bigger or lesser; as for a Line of three hairs, a Cork of an inch and half in length, and as much in compass in the thickest part, is big enough; and for a Line of more hairs, a Cork of more length and compass will become it. And indeed to speak truly, so far as it serveth but only for a direction to your eye, to know when the fish bite, and when you shall strike; the lesser your Cork is, the better it is, and breedeth less afright in the water, in so much, that many Anglers will fish without any Cork, with a bare quill only, but that it is not so certain, nor gives so sure direction as the Cork doth. After you have shaped your Cork, you shall with a hot Iron bore a hole long-wise, through the midst thereof, and into that hole thrust a quill, and through the quill draw your Line, and fasten them both together with a wedge of the hard end of the Goose feather. And note, That both your quill and your wedge be white, for that breedeth least offence on the water; then place the smaller end of your Cork down toward your hook, and the bigger end toward your rod, that the smaller end sinking down with the hook, the bigger may float aloft and bear the quill upward, which when at any time you see or perceive pull'd down into the water, then you may safely strike; for without doubt it is an assured sign that the Fish hath bitten at the bait.

There be other Anglers, which make their Corks in the fashion of a Nunne's gig, small at both ends, and big in the midst, and it is not much to be disliked, only it is a little sooner apt to sink, and you may thereby strike before the fish have full bitten. Others shape their Corks in the fashion of a whistle, or of a little apple, round flattish of both sides, and this Cork is best to Angle for the greatest Fishes, because it being not so apt to

sink, will float till the hook be fastned, and that the Fish beginneth to shoot away with the bait, so that a man then striking can seldom or never lose his labour.

Of Angling-
hooks.

Next to your Corks, is your Hooks, and they be of divers shapes and fashions, some big, some little, some between both, according to the Fish at which you angle: the best substance whereof to make them, is either old Spanish needles, or else strong wier drawn as near as may be to that height of temper, which being nealed and allaid in the fire, you may bend and bow at your pleasure. Now for the best softning of your wier, if you make your hooks of old needles, you shall need but to hold them in the blaze of a candle till they be red hot, and then let them cool of themselves, and they will be soft and pliant enough; but if you make your hooks of strong Spanish Wier, you shall roul it round, and lay it upon burning Charcoals, turning it up and down till it be all red hot in every place, then let it gently cool of it self, and it will be soft enough.

Now for the making of your hooks, I advise you to go to such as are best reputed for making of them, and buy of all sorts from the biggest to the least; that is to say, from that which taketh the Loach, to that which taketh the Salmon; and let them lie before you for examples: then look of what sorts of hooks you intend to make, and with a fine File first make the point of your hook, which would neither be too sharp, for then it will catch hold of every thing, when it should not; nor too blunt, lest it fail to take hold when there is occasion: therefore in that observe a mean, making it less then a fine needle, and more sharp then a small Pin. When you have made the point, then with a thin knife of a very good edge, you shall cut out and raise up the beard, which you shall make greater or less, according to the bigness of the hook, and the strength of the wier: for you must by no means cut the beard so deep, that thereby you weaken the hook, but must be as strong in that place as any other. When the point and beard is made, you shall with a fine pair of round plyers, turn and compass the hook about, making it round, circular wile, being somewhat more then a semi-circle; and ever

observe

observe, that the rounder the compass or bout cometh in, that so much the better proportioned the hook is. This done, you shall leave as much as you think convenient for the shank, and then cut it off from the rest of the wiew; which done, you shall beat the end down flat, and somewhat broader then the rest, and so polish and smooth it all over, then heating it red hot in a little pan of Charcoals, put it suddainly into the water, and quench it, which will bring your hook to a full strength and hardness.

Thus you see how to make hooks of all sizes and shapes, whether they be single or double hooks, for although the quantities alter, yet the shapes do not; and the double hook, which is the Pike-hook, is no other but two single hooks all of one wiew turned contrary-ways, and this double hook must not have the line fix'd unto it, but a strong wiew joyned unto it, of three inches long, well wound, and wrapped with a smaller wiew: then add to it another wiew of the same length, as if there were two several links joyned together, and then the line fixed to the last link; and therefore are called armed hooks, for they defend the line from bearing or cutting in pieces with the teeth of the Pike.

Now for your single hooks, you shall thus fix them unto your lines, take a length of your twisted hairs, containing that number which is fit for the hook, and having made a strong loop at the one end, lay the other end where there is no bout, upon the inside of your hook; then with a strong red silk either single or double, according to the bigness of the hook, being well waxed, whip and wrap the hook round about, as thick, close, and strait as may be, in such sort as you see men whip their Bow-strings, and in the same manner make the ends of your silk fast; then with a scissors cut the silk and hairs off close by the hook, and you may be sure that they will not loose one from another, with reasonable violence.

After your hook is thus fastned to your line, you shall then turn your line, which is to fix certain pieces of lead, according to the bigness of your line about it, some being in length a quarter of an inch, some bigger, and some less, according unto the weight

weight of your hook, and bigness of your Cork, for these plummetts are but only to carry down your hook, and lay it in the bottom, neither being so heavy to make the Cork sink; nor so light, as not with the smallest touch to make the Cork to dip into the water; you shall then understand, that your first plummet would be twelve or fourteen inches from the hook, the rest not above one inch distance one from another, not being above five or seven at most, albeit some Anglers use nine, and some more, as their fancies rule them. There is in plumbing of Lines, three several fashions of Plummetts used, as one long, another square, and the third in a Diamond form, but all tending to one end, have but one use, and the long ones are accounted the best, so that they be neatly set to, and the end very smooth and close laid down, so that they tangle not the Line by catching hold upon weeds, or other trash in the bottom of the water.

Of other Implements for Angles.

Thus have you seen the best choice of Rods, Lines, Corks and Hooks, and how to fix and couple them altogether to do their several Offices; It now resteth that we speak of other necessary implements, which should accompany the Painful and Industrious Angler, and they be these: He shall besides these before spoken of, have a large Musket-bullet, through which having fixed a double twisted thread, and thereof made a strong loop, he may at his pleasure hang it upon his hook, and therewith sound the depth of every water, and so know how to plumb his lines, and place his Cork in their due places; then he shall have a large ring of Lead six inches at least in compass, and made fast to a small long Line, through which thrusting your Angle Rod, and letting it fall into the water by your hair-Line, it will help to unloose your hook if it be fastned either upon weed, or other stones in the water.

Then he shall have a fine smooth Board of some curious wood for shew sake, being as big as a Trencher, and cut battlement-wise at each end, on which he shall fold his several Lines. His Hooks he shall have in a dry close Box, he shall have a little bag of red cloth, to carry his Worms in, and mix with them a little fresh mould and Fennel: then he shall either have a close

stop

stopt horn, in which he shall keep Maggots, Bobbes, Palmers, and suck like, or a hollow Cane, in which he may put them, and Scarrabs: He shall have a close Box for all sorts of live flies, and another for Needles, Silk, Thread, Wax, and other loose hairs; then a roul of pitch thread to mend the Angle-Rod withal, if it chance to break, a file, a knife, a pouch with many purses, in which you may place all your implements whatsoever severally.

Lastly, He shall have a little fine wanded Peppe to hang by his side, in which he shall put the fish he catcheth; and a small round net fastened unto a poles end, wherewith he may land a Pike, or any other great Fish of that kind whatsoever. To have also a little Boat or Cot; if you Angle in great Waters, to carry you up and down, to the most convenientest places for your pastime, is also right necessary, and fit for an Angler; And thus I have shewed you the substance of the Anglers instrument.

CHAP. II.

Of the Anglers Apparel, and inward Qualities.

Touching the Anglers Apparel (for it is a respect as necessary as any other whatsoever) it would by no means be garish, light-coloured, or shining, for whatsoever with a glittering bewitcheth upon the water, immediately it frighteth the Fish, and maketh them flee from his presence; no hunger being able to tempt them to bite, when their eye is offended; and of all creatures there is none more sharp-sighted then Fishes are.

Let then your apparel be plain and comely; of a dark colour, as Russet, Tawny, or such like, close to your body, without any new fashioned flashes, or hanging sleeves, waving loose, like sails about you, for they are like blinks, which will ever chase your game from you: let it for your own health and ease sake, be warm and well lined, that neither the coldness of the Air, nor the moistness of the Water may offend you: keep your head and feet dry, for from the offence of them springeth Agues, and worse infirmities.

Now for the inward qualities of minde, albeit some

Anglers Vertues.
Writers

Writers reduce them to twelve heads, which indeed whosoever enjoyeth, cannot chuse but be very compleat in much perfection, yet I must draw them into many other branches. The first, and most especial whereof is, That a skilful angler ought to be a general Scholler, and seen in all the Liberal Sciences, as a Grammarian, to know how either to Write or Discourse of his Art in true and fitting terms, either without affectation or rudeness. He should have sweetness of speech, to perswade and intice others to delight in an Exercise so much laudable. He should have strength of Arguments to defend and maintain his profession, against envy or slander. He should have knowledge in the Sun, Moon, and Stars, that by their aspects he may guess the seasonableness or unseasonableness of the weather, the breeding of storms, and from what Coasts the winds are ever delivered. He should be a good knower of Countries, and well used to High-ways, that by taking the readiest paths to every Lake, Brook, or River, his Journies may be more certain, and less wearisome. He should have knowledge in proportions of all sorts, whether Circular, Square, or Diametrical, that when he shall be questioned of his diurnal progresses, he may give a Geographical description of the angles and channels of Rivers, how they fall from their heads, and what compasses they fetch in their several windings. He must also have the perfect art of numbring, that in the sounding of Lakes or Rivers, he may know how many foot or inches each severally containeth; and by adding, subtracting, or multiplying the same, he may yield the reason of every Rivers swift or slow current. He should not be unskilful in Musick, that whensoever either melauncholy, heaviness of his thoughts, or the perturbations of his own fancies, stirreth up sadness in him, he may remove the same with some godly Hymn or Anthem, of which *David* gives him ample examples.

He must be of a well settled and constant belief, to enjoy the benefit of his expectation; for then to despair, it were better never to be put in practice: And he must ever think where the waters are pleasant, and any thing likely, that there the Creator of all good things hath stored up much of plenty, and though you
satisfac

satisfaction be not as ready as your wishes, yet you must hope still, that with perseverance you shall reap the fulness of your harvest with contentment: Then he must be full of love both to his Pleasure and to his Neighbour: To his pleasure, which otherwise will be irksome and tedious; and to his Neighbour, that he neither give offence in any particular, nor be guilty of any general destruction: Then he must be exceeding patient, and neither vex nor excruciate himself with losses or mischances, as in losing the prey when it is almost in the hand, or by breaking his Tools by ignorance or negligence, but with a pleased sufferance amend errors, and think mischances instructions to better carefulness.

He must then be full of humble thoughts, not disdainning when occasion commaunds to kneel, lye down, or wet his feet or fingers, as oft as there is any advantage given thereby, unto the gaining the end of his labour. Then must he be strong and valiant, neither to be amazed with Storms, nor affrighted with Thunder, but to hold them according to their natural causes, and the pleasure of the Highest: neither must he, like the Fox which preyeth upon Lambs, employ all his Labour against the smaller Prey: But like the Lyon that seizeth Elephants, think the greatest Fish which swimmeth, a reward little enough for the pains which he endureth. Then must he be liberal, and not working onely for his own belly, as if it could never be satisfied; but he must with much cheerfulness bestow the fruits of his Skill amongst his honest Neighbours, who being partners of his gain, will doubly know his triumph, and that is ever a pleasing reward to Vertue.

Then must he be prudent, that apprehending the Reasons why the Fish will not bite, and all other casual impediments which hinder his sport, and knowing the Remedies for the same, he may direct his Labours to be without troublefomeness.

Then he must have a moderate contentation of the Mind to be satisfied with indifferent things, and not out of any avaritious greediness think every thing too little, be it never so abundant.

Then must he be of a thankful nature, praising the Author of all goodness, and shewing a large gratefulness for the least Satisfaction.

Then must he be of a perfect memory, quick and prompt to call into his mind all the needful things, which are any way in this exercise to be employed, lest by omission or by forgetfulness of any, he frustrate his hopes, and make his labour effectles. Lastly, he must be of a strong constitution of body, able to endure much fasting, and not of a gnawing stomach, observing hours, in which if it be unsatisfied, it troubleth both the Mind and Body, and loseth that delight which maketh the pastime only pleasing.

Cautions.

Thus having shewed the inward Vertues and Qualities which should alwayes accompany a perfect Angler, it is very meet now to give unto you certain Cautions, which being carefully observed, you shall with more ease obtain the fulness of your desires. First therefore, when you go to Angle, you shall observe, That all your Tools, Lines, or Implements be (as the Sea-man saith) yare, fit, and ready; for to have them reve'd, ill made or in unreadiness, they are great hindrances unto your pleasure. Then look that your baits be good, sweet, fine and agreeing with the season: for if they be otherwise unproper in any of their natures, they are useless, & you had better have been at home then by the River. Then you must not Angle in unseasonable times, for the Fish being not inclined to bite, it is a strange inticement that can compel them. Then you must be careful neither by your apparel, motions, or too open standing, to give affright to the Fish; for when they are scared they flye from you, and seek society in an empty house. Then must you labour in clear & untroubled waters, for when the Brooks are any thing white, muddy and thick either through inundations or other trouble, it is impossible to get any thing with the Angle: Then, to respect the temper of the weather, for extreame wind or extreame cold taketh away all manner of appetite from Fish: So doth likewise too violent heat, or rain that is great, heavy, and beating, or any Storms, Snows, Hail or Blustrings, especially that which cometh from the East, which of all is the worst. Those which blow from the South are bad; and those which come from the North or West are indifferent. Many other Observations there are, but they shall follow in their due places.

CHAP. XII.

Of the best and worst Seasons to Angle in, and their Uses.

BEfore I direct you in the best Seasons; and their contrary, the general Art of Angling; I think it not amiss, a little by the way, to give you a glance or speculation how to order your Body and Art of each several water: for the manner of your standing and concealing of your self is a material and chief point in this Art.

Know then, That if you angle in any Pond or standing Water, The Anglers manner of standing. you shall before you fall to your business, with your Plumb, find the Water in divers places, and where you find it deepest, blackest, and least transparent; there you shall stand to Angle, placing your self under the bank, and if it be possible, so as your shadow may be carried from the Water: For you must at no time, if you can chuse, let your shadow lye upon the water: and although in these deep places your standing open or close, are either of them reckoned indifferent, because the waters depth is a sufficient concealment, yet the closer you stand, is accounted amongst Anglers most handsome and artificial.

But if you go to Angle at the River, then the best place to cast in your Line, is, where it is deepest and clearest, so as you may behold the Sand or Gravel at the bottome: and in these places you shall strive to conceal your self as much as possible, as standing behind Poplars, Oziers, or other Trees, or under the covert of some Bank, Rock, or other ruines at the side of the River: also in covert places, where are many Weeds, Roots of Trees, and other rubbish, is good Angling; but very troublesome: for Fish lying there warm and in safety, will have a great resort threunto, and bite freely, so that the Angler must be careful in the putting in of his hook; and very deliberate in striking, lest doing any thing rashly, he break his Line and hook, being never so little intangled.

It is good also to Angle in White pools, for they being like pits within the River, are seldome unfurnished of the greatest Fishes; also, it is good to Angle at the falls of water, as

under Bridges, standing behind the Jawmes and Arches, or at the flood-gates of Mills, being hid with the higher Timbers. And generally where you see the water is deepest, clearest and calmest, being least troubled with wind or weather, is the fittest place to angle in. Other observations there are, but they will follow in more necessary places.

The best season to Angle in.

To return then to our first purpose. You shall know the best season to Angle in, is from *April* to the end of *October*, speaking of the general use of the pleasure; and the best hours also in general account, are from four in the morning till nine, and from three in the Afternoon till after five in the Evening, the wind blowing from South, West, or North, and the ayr temperate, inclined to warmth; but to speak of particular observations of seasons, know, that if the day be dark, close and lowring, or have a gentle whistling and playing upon the water, it is good to Angle in, and the Fish will bite with pleasure: Nay, if a fine mizzling dew of Rain fall gently, without violence, they will then bite the faster: Also after Floods are gone away, and the Rivers are come within their own Banks, the first cleanness recovered, and the water pure, then it is good to Angle. And generally for your Summer Angling, choose the coolest time of the day, for in the heat of the day Fish betake themselves to their rest, and will neither bite nor play.

But for your Winter Angling, which is from *October* to *April*, you shall not make any difference of time, if the weather be calm, for all hours of the Sun are alike, only the noon-tide or mid-day is most preferred, especially in Ponds and standing water. If the water where you Angle, ebbe or flow, the best time of Angling, is held to be in the ebbe: yet in some places where the Tide is not great, there the flood is preferred. Lastly, whenever you see the Trout play or leap above the water, and the Pike shut in pursuit of other fishes, it is then a very good time to Angle in using such baits as are then meet for the moneth and season, as shall be shewed hereafter.

Seasons ill to Angle in.

Now for those seasons which are naught to Angle in, there is none worse than in the violent heat of the day, or when the Winds are loudest, Rain heaviest, Snow and Hail extreamest: Thunder and Lightning are offensive, or any sharp ayr which flyeth from the

the East : The places where men use to wash Sheep you shall forbear, for the very smell of the Wooll will chase fish from their haunts; Land-floods are enemies to Anglers; so also at the fall of the Leaf is the shedding of leaves into the water, and many other such like pollutions, of which we will speak something more hereafter.

Therefore, to conclude this Chapter, and to shew you as well how to find your fish, as the Art to take it being found, you shall know, that the Carp, Eele, and Tench, do ever haunt muddy places: the first, which is the Carp, lyeth ever in the depth and bottom thereof; the Tench, among the weeds and roots of Sedges; and the Eele under stones, blocks, or the roots of Trees.

Of Fishes
Haunts.

The Bream, the Chevin and the Pike, haunt ever in the cleer and sandy bottom; the Pike where you see great store of small fry; the Chevin where the stream runneth swiftest, and the shade is greatest; and the Bream where the water is broadest, and the depth giveth greatest liberty, and generally these three sorts of Fish delight more in standing Waters then in running Rivers, although the ancient Proverb is,

*Ancome Eele, and Wiltam Pike,
In all England is none fike.*

which are Rivers in Lincolnshire. Now the Salmon hath his haunt in the swiftest and broadest Rivers, whole Channels fall down into the Sea. The Trout loveth smaller Brooks, whose current is swift, clear, gravelly, and ever hath his lodging in the deepest holes that are therein; and the Perch haunteth Rivers of the same nature, only he abideth most in Creeks & hollowneses, which are about the bank; and indeed these three Fishes generally, Salmon, Trout and Perch love clear streams, being green with weeds, and the bottom shad with gravel and pibble.

The Gudgeon, the Loach and the Bulhead haunt ever shallowest places, and where streams are slow yet transparent: The Barbel, Roch, Dace and Ruff, haunt the deep shady places of these Brooks, which are mixt with more sand than gravel, or where the clay is firm and not slimy, and delight ever to lye under the shadowes.

dows of Trees, brambles or other things growing from the bank.

The Luce or Lucern, which indeed is but the over-grown Pike, haunteth the broad and large Mears, which are miles in compass, being deep and still, and ever lodgeth in the bottom thereof amongst the Roots and Tufts of Sedge, and Bulrushes, being quiet and least troubled. The Humber haunts the clayie Rivers of High Countreys; which the soyl is rich and full of Marle, or in Lakes or Ponds of the same nature. The Shad and Tweat haunt those Waters which are brackish, deep, and accustomed to ebb and flow: and where they haunt, there commonly also is found both the Mullet and Suant: all which love to lodge close and flat at the bottome of the Water, so it be more Ooze than gravel.

Objection.

But here now methinks I hear the Curious reprehend me, saying, that if these Rules should be infallible, that then no River or Pond could contain above three sorts of Fish only, when daily Experience sheweth us, that some Rivers have ten, some twenty, and some thirty. As the *Trent* for example, whose ancient name in French is *Trianta*, in Latine *Triginta*, and in English *Thirty*, derived from this ground, because there standeth upon her, Thirty Castles, Thirty Market Towns, and are in her Thirty several sorts of Fishes.

Answer.

To which I thus answer, that forasmuch as into most Rivers falleth many several waters and many soyls, according unto the nature of those Countreys through which the Channels run, that therefore every alteration of soyl may alter the breed of Fry, and many several kinds may be in one Stream, for that the Angler in the choice of his pastime in such places, must either have a perfect knowledge how the soyls do alter (which he may commonly know by the bank,) or else rely upon his experience, which will be the best Tutor to direct him unto the haunts of several Fishes; but for Ponds or standing Waters which are of one earth, there you shall surely find them best prosper, which are before rehearsed.

CHAP.

CHAP. XIII.

*Of Baits in general, and of every particular kind; their
Seasons, Use, and Preservations.*

SINCE I have thus far orderly passed over the outward and instrumental necessities appertaining to the modest Recreation, shewing the several tools and implements which are to be employed therein, and have also shewed the inward and mental knowledg which should be harboured in his breast that will be an Angler; I will now proceed to speak of the Baits and inticements, which are the Agents and effecters of our desires in this pastime, without which all other implemeents are vain and useless: for what doth it avail to have all other things in perfection, when this, which is the strength and life of the rest, is either imperfect or defective?

To speak then generally of Baits, they are divided into three kinds, which are Life-baits, Dead-baits, and Baits living but in appearance only. Your Life-baits are Worms of all kinds especially the Red-worm, the Maggot, the Bobb, the Dor, Brown-flies, Frogs, Grasshoppers, Hornets, Wasps, Bees, Snails, small Roches, Bleaks, Gudgeons or Loches. Your dead baits are pastes of all makings, your brood of Wasps dried or undried, the clotted blood of Sheep, Cheese, Bramble-berries, Corn, Seeds, Cherries, and such like. And your Baits which seem to live, yet are dead, are Flyes artificially made of all sorts and shapes, made of silk and feathers about your hooks, which will serve for every several season through the year, and being by your Line moved upon the water, seem to be live flyes, which the Fish with great greediness will catch up and devour.

Now for the season in which these baits are most profitable, you shall understand that the Redworm will serve for small Fish all the year long; the Maggot is good in *July*, the Bobb and Dor in *May*, the brown flyes in *June*, Frogs in *March*, Grasshoppers in *September*, Hornets in *July*, Wasps and Bees in *July*, Snails in *August*; for the Roch, Bleak or Gudgeon they serve the Pikes any season: all Baits are good in *May*, *June*, and *July*; dried Wasps in *May*, Sheeps Blood and Cheese in *April* for Bramble-berries,

Seasons.

Of Flyes.

berries, Corn and seeds, they are good at the fall of the Leaf. Lastly, for your dead flyes, which are most proper for the Trout or Graveling, you shall know that the Dun Fly is good in *March*, being the lesser; but the greater Dun Fly will serve the latter end of *February*: the Stone Fly is good in *April*, the Red Fly and Yellow Fly in *May*; the Black Fly, the dark Yellow Fly, and the Moorish Fly in *June*; the Tawny Fly part in *May*, and part of *June*; the Wasp Fly, and the Shell Fly in *July*; and the Cloudy-dark Fly in *August*.

The making
of Flyes.

Now for the making of these Flyes, the Cloudy dark Fly is made of black Wooll clipt from between a Sheeps Ears, and whipt about with a black silk, her wings of the under mail of the Mallard, and his head made black and suitable, fixed upon a fine piece of Cork, and folded so cunningly about the hook, that nothing may be perceived but the point and beard only. The Shell flye is made of fine green Flocks, and the wings of a Pew-glead. The Wasp Fly is made of Black Wooll, lapt about with yellow silk, and the wings of the down of a Buzzard. The Tawny Fly is made of rawny wooll, and the wings set on contrary to another, and made of the white down of a Widgeon. The Moorish Fly is made of fine Flocks shorn from a Freeze-gray Ruffet, and the wings of a Drake. The bright Yellow Fly is made of yellow Wooll, and his wings of a Red Cocks yellow main. The sad yellow Fly is made of black Wool, with a twisted yellow silk, like a list, whipt down on either side, and the wings of a Buzzard, set on with black thread. The Black Fly is made of black Wooll, and lapt about with the herle of a Peacocks tayl, his wings with the brown feathers of the Mallard, and some of his blew feathers on his head. The Red Fly is made of Red Wooll, lapt about with black silk, and the wings of the Mail of a Mallard, with some of the feathers of a Capon. The Stone Fly is made of black wooll made yellow under the wings, and under the tayl with silk, and the wings of Drakes down. The greatest Dun Fly is made of black Wooll, and his wings of the Dun feathers of a Drakes tayl. The lesser Dun Fly is made of dun wooll, and his wing of the mail of a Partridge.

Now for the shapcs and proportions of these Flyes, it is impossible to describe them without Painting, therefore you shall take

of these several Flies alive, and laying them before you, try how near you can come unto nature, by an equal shape and mixture of colours; and when you have made them, you may keep them in close boxes uncrushed, and they will serve you many years.

Now for the preservation and keeping of your quick baits (for longer then they are neat and sweet they are not good) you shall understand, that they must not be kept altogether, but every kind severall by it self, and nourished with such comforts, as it delighteth in, when it is at liberty, or with such things as they breed in or upon when they are first taken. And first for the Red Worm; when you take them, you shall put them in a bag of read cloth and chopping a handful of Fennel, mixe it with half so much fresh mould being black and fertile, and they will both live and scour therein. There be some Anglers which put wet mosse both under and above them: Others there be, which put Parsly or sweet Majorom unto them; but the former way is the best, so you observe every night to renew their earth, or once in two dayes to refresh them with a little new Oxe-dung; and thus you may keep them two moneths without imperfection. For the great white Maggots, you shall mixe with them sheeps tallow, or little bits of a Beasts Liver; the best way to scour them, is to put them into a bag of blanketing with sand, and hang them where they may have the air of the fire, or other warmth, for the space of an hour or two. For Frogs and Grasshoppers, you shall keep them in wet moss, and long grass, moistned every night in water; and when you angle with them, you shall cut off their legs by the knees, and the Grasshoppers wings near unto the body. For other Worms, as the Bob, Cadis-worm, Canker, and such like, you shall keep them with the same things you find upon them; and for all live Flyes, you shall use them as you take them, only the Wasp, the Horner, and Humble-Bee, which is without sting, you shall first dry them a little in a warm oven after the bread is drawn, and then dip all their head into sheeps blood, and then dry them again, and so keep them in a close box, and they will continue two or three moneths in all good perfection.

Now lastly, to speak of your made baits which are pastes, the most of them will last the whole year, and as they be divers, so I

Preservation
of Baits.

Of making
pastes.
will

will shew you how to compound every one of the ^{best} for his true and perfect nature.

First, to make Pastes that shall last longest; you shall take Bean-flower, and those parts of the Conies leg which is called the Almond of the Coney; or if it be of a fat young Whelp, or a Cat, it is as good: and to these put a like quantity of Virgin Wax, and Sheeps suet, and then beat them together in a Mortar, untill they be made one body, then with a little clarified Honey temper it before the fire, and so make it up in round balls, and it will last all the year: And the use thereof is, when you angle, to bait your hook therewith, and not any Fish which swimmeth in fresh waters, but will greedily bite thereat.

There is also another paste which is of equal quality and use with this, and will last as long, and that is, to take the Kidney-tallow of a sheep, and as much young Cheese, and beat them in a Mortar till they be one body, then add to them as much Wheat-flower as will bring it to an exceeding stiffe paste, then knead it before the fire, and allay the stiffness with life-honey, and so make it up into balls.

The use of this paste is like the former. Take the blood of a Sheep, and of honey a like quantity, and beat them together with a lump of fresh Cheese, then with the fine grated crums of white bread, work them into a stiffe paste, and so roul it up in balls; and when you angle, do not bait your hook therewith but now and then cast little pellets thereof into the water, and it will intice the fish to resort unto you, and to bite with great greedinesse.

There be others which take bread crums, and beat them in a Mortar with ripe Cherries (the stones being taken out) untill it come to a stiffe paste, and then knead it up into balls, and use it as you do that which was last recited. It is most approved, and very excellent for all sorts of fish in fresh water.

Lastly, If you take the oyl of the Aspray, and Coculus India, and Asafoetida beaten, and mixe with it as much life-Honey, and then dissolve them in the oyl of Polypody, and so keep it in a close glass, then when you angle anoint your bait with this confection, and though the weather be never so unseasonable, or the fish never so ill disposed to bite, yet be sure you shall not loose

your

your labour, but take them when all men else fail of their purpose: for the secret hath been rarely approved, and hitherto hath been concealed with great secrecie. And thus much for baits, and their uses.

CHAP. XIV.

Of Angling for every severall kind of Fish, according to their natures.

NOW to shew you how you shall angle most properly for every severall Fish, with true art, according to the nature of the fish, I think it not amiss, first to begin with the Gudgeon, Roch, and Dace, which being Fishes of eager bite, most foolish, least affrightful, and soonest deceived, are the first fittest preys for young Schollers, and such as are but Learners in the Art of Angling; for the easinesse of their gaining, will not only settle an unresolv'd mind, but give unto ignorance both comfort and encouragement.

Of the Gudgeon, Roch, and Dace.

If then you will angle for any of these small Fishes in great streams, it shall be meet to take a Boat, and finding the places of their haunt, which is commonly in sandy clear waters, and where they run swiftest, there angle for them with your smallest hooks, well headed, and smallest Lines, well corkt. Your hook would rather drag than be an inch from the bottome, and your best bait is the Red-worm, Cod-worm, Maggot, clotted blood of Sheep cut in little bits, or else the white spawn or brood of Wasps: and ever as soon as you see the cork stir, suddenly strike, for they will lie nibbling at the bait, and finding the hook, forsake it. If you angle for them in small Brooks, you shall stand under Bridges, at the falls of Mills, behind Poplars, or Ozlers, or any where, where the stream runneth deep and swift. And ever note, That when your bite fails, you remove your place, and seek out a new standing. And with all forget not ever when you angle for any of these fish, to cast in some of your pisse before your hook, for this will make your sport much more abundant: and although the Dace out of his own nature bith high, and near the top of the water, yet these baits and mimentments will make him stoop, and be taken easily.

Of the Carps.] If you will angle for the Carp, you must have a strong Rod and a strong Line, of at least seven or nine hairs, and either mixt with green or watchet silk, your cork must be large, long and smooth; your Leads smooth and close, and fixt near the hook, and the hook almost of a three-penny compass. He is very dainty to bite, but at some special hours, as very early in the morning, or very late at night, and therefore he must be very much entised with paste; his best Baits are the Moss-worm, the Red-worm, or the Menew, for he seldome refuseth them. The Cadis-worm is good for him in *June*; and the Maggot, Black-worm or Grasshopper, in *July*, *August* and *September*. If you make paste of sour Ale, white of Eggs, and bread-crumbs, it will very much entice him. Also I would ever wish you before you fish for the Carp, to cast in a handful of white-bread chippings into the Pond or River, for they will not only entice him to your bait, but also give you notice if you be near his haunt, for you shall presently hear him smack above the water; and then if you miss him, either your fortune or skill is not good.

**Of the Chub,
Chevin, or
Trout.**

If you will angle for the Chub, Chevin or Trout, all your instruments must be strong and good; your rod dark and discoloured, your line strong, but small and short, your hook of a two penny compass; and if you angle with a Flye, then nor lead, nor cork, nor quills, if otherwise, then all of a handsome and suitable proportion.

The best standing to take them, is in close and concealed places, as behind trees, walls, or Arches of Bridges; their haunts are in clear waters, which run upon sand or gravel: and they are in best season, from *March* till *Michaelmas*. If you angle for them with dead Flyes without Lead or Cork, I have shewed you in the former Chapter, the several Flies for each several moneth; but if you angle for them with other baits, then you must have both Cork and Lead, for he will bite near the bottom, yet sometimes you may angle for him with a small Menew, hang'd at your hook by the neather parts, without Cork or Lead, and so draw the bait upon the top of the water; and both with it and with every Flye, strike rather before than after he bitheth. If you angle for him at the ground, in *March*, *April*, *May*, and *September*,

summer, the Menew is good bait, so is the Stone-Fly, Cadis-worm, Bob, Red worm, Ditch Canker, young Frogs, the Worm that breedeth on the Ozier leaf, and the Dock-Canker mixt together. In *June*, Crickets and Dor-flies are good. In *July* the Grasshopper is good, so is the Humble Bee, dried Wasps, or dried Hornets, or any of their young brood in the combs. In *August* flying Bismires are good, so is the Colewort-Worm, or the Maggot. And in *September*, Cherries, Mice before they have any hair, or the great Sow-worm.

If you will angle for the Eele, the best place is at Weares, Of the Eele; Mill-Ponds, Bridges, hollow Banks, or any swift falling water; your Line strong, and not above 2. Els in length, and very heavily plumb'd, a good round hook, but no cork, because you must not strike till the Eel pluck: neither must you by any means pull hastily, but holding your Line stiff, with Labour and patience tire him, lest that tearing his chaps, you lose him. The best bait is the Red-worm, or little pieces of sheeps guts.

The Flounder and Sewant are greedy biters, yet very crafty, Of the Floun-
der and Sew- for they will nibble and suck at a bait a good while before they swallow it, and if they perceive the hook, they will flie from it, ant. Therefore to make them more hasty of the bait, you must ever be moving your line, and seldome let it lie still. They lie most commonly in the deepest places of the River, where the water is stillest, and runneth with least force. Also they lie near unto the bank, and delight most in the stream which is brackish, and mixt with the salt water. Your lines must be strong, and well plumb'd near to the hook, and the best bait is the Red Worm, and the young brood of Wasps.

The Barbel or Geyling, which some call the Ember, are very Of the Grey-
ling or Barbel. subtle and crafty fishes. Therefore you must be very careful that your baits be sweet and new, and when you angle for them, do in all things as you do for the Trout: for they bite aloft in the Summer, and at the bottom in the Winter. Your Lines must be extraordinary strong, and your hooks of a three penny compass, for they are fishes of weighty bodies, and when they are struck, must have liberty to play and trie themselves, or else they will in danger the breaking of your Rod, and therefore your Line must be of the longest size.

The

The best season to angle for the Bream, is from the later end of *February* till *September*: he is a very lusty strong fish, and therefore your tools must be good: the baits in which he most delighteth is, in Worms of all sorts, Butter-flies, green Flies, paste of Bread crumbs, or the brood of Wasps.

Of the Tench.

The Tench is a Fish that ever loveth the bottom of Rivers, where the Ooze or Mud is thickest, and is most fit to be angled for, in height of Summer; for at other seasons he is not apt to bite, and at all times he is very dainty.

The Baits in which he delighteth most, are pastes that are very sweet; and the browner the better, especially if it be made with the Blood of a Sheep. At the great Red Worm also he will bite, and so much the sooner, if you mix them with this paste: The Maggot and dried Wasp he will seldome refuse, chiefly being dipt in Honey.

Of the Bleak,
Ruff, and
Perch.

The Bleak, Ruff, and Perch are Fishes which bite neither high nor low, but for the most part in the midst of the water; therefore your Line must be very lightly plumb'd, and far from the hooks. The Baits which most intice them, besides the Red-worm, is the House-Fly in the Summer, and fat of Bacon in the Winter: In *April* they will bite well at the Bob-worm or Maggot, and in all other seasons they seldome refuse any Worm or Canker. Your Line would be small, and well armed from the hook a handful, with smaller wiew, for the teeth of the Perch will else gnaw it asunder.

Of the Pike.

The Pike is a Fish of great strength and weight, inasmuch, that you can hardly have a Line of hair to hold him; therefore your best Anglers use most commonly a Chalk line; your Angle-rod also must have no small top, but be all of one piece and bignesse, and the line made exceeding fast from slipping. Your hook would be of the strongest wiew, white or yellow, and made double, the points turning two contrary wayes, and then armed with strong wiew a foot at least: his best Bait is a little small Roch, Dace or Menew, the hook being put in at the tail, and coming forth under the gills, and you must seldom or never let your bait lie still in water, but draw it up and down, as though the fish did move in the water, and fled from the Pike, for this will

will make him more eager and hasty to bite : and having bit, you must be sure to tire him well before you take him up.

The yellow live Frog is also an excellent bait for the Pike, for you must understand, that they naturally delight not in any dead or unmoving food.

There be some which take a great deal of delight and pleasure to Snickle or halter the Pike, which is good, when Pikes are broke out of Ponds or Rivers, and come into small Ditches or Rundles, as is oft to be seen in low-Countries. The way then to halter them, is first to find the Pike where he lieth (which in the heat of the day you may easily do) then take your Chalk-Line, and making a large running nooze thereof, put it gently into the water, about two feet before the nose of the Pike, then when you feel it touch the ground, cause one to go behind the Pike, and with a pole to stir him, then as he shooteth, meet him with your nooze, and so with a sudden and quick jerk throw him upon the Land. In this sport you must be very ready, nimble, and quick-sighted, for if you give him the least time, he will escape you.

Of Snickling
the Pike.

Now lastly, touching the angling for the Salmon, albeit he is a Fish which in truth is unfit for your travel, both because he is too huge and cumbersome, as also in that he naturally delighteth to lie in the bottoms of great deep Rivers, and as near as may be in the midst of the channel ; yet so far as many men esteem that best which is got with most difficulty, you shall understand that the baits which he most delighteth in, are those which serve for the Trout, as paste or Flies in the Summer, and Red-worms, Bob-worms, or Cankers on the Water-docks after *Michaelmas*. And thus much for the Art of Angling, and taking of each several sort of fish which live in the fresh or brackish waters.

Of the Sal-
mon.

CHAP. XV.

Of taking Fish without Angles: And first of laying Hooks.

THe laying of hooks to take fish in the Night, is most commonly used for the Pike, in great broad Waters or Meers full of Sedges, Bulrushes, and other Weeds, being very deep and muddy: Some do use to lay them for the Eele also, but you shall understand, that if you lay for the Pike, you must by no means let your hook go to the bottom, but with a float keep it half a foot from the ground; but if you lay for Eels, then let your hooks be smaller, and sink as low as they will,

Now for the manner of laying them, you shall bait the hooks as you did when you angled, with Menew, Roch, Dace, Gudgeon, or Millers thumb; and being made fast to strong pack-thread, fasten also that pack-thread to a strong cord, which cord if it be three fadom in length, may hold sixteen or twenty hooks. Then fixing two strong stakes, and so let it lie from Sun-set, untill Sun-rise, and you shall never fail, but some of your hooks will have taken. Only observe, if you lay for Pikes, to lay in the midst of the water, near unto the sedge and weeds; but if you lay for Eels, lay very near the banks, so there be no hollow or rotten Trees growing thereon.

Now if you would with these laid hooks take any other sort of Fish, you shall lay such hooks as are fit for them: and before you depart away, cast into the water good store of pellets of those pastes which are proper for the Fishes you would take; as the paste which is made of Bran, Sheeps blood, Garlick, and Lees of Wine, will take all sorts of small fish: that paste which is made of Sheeps Liver, Guts, Hogs blood, Bread crums, and Opopanax, will bring Perch, Tench, Carp or Bream unto your hooks; and that paste which is only made of Rue, Pine-apple kernels, Bean meal and Honey will bring the Salmon, the Trout, Chevin, or Barbells unto your hooks, at all times of the year.

CHAP. XVI

Of preserving Fish from all sorts of Devourers.

Amongst all the Ravenous Creatures which destroy Fish there is none more greedy than the Otter, whose only food being thereon, hourly lyeth in wait to consume them: Therefore though some Fisher-men use to take them with a Wheel made with a double tunnel, and called by the name of the Otter-wheel, whose practise is so ordinary, that every Fisher-man knows the use of the same: Yet for a more easie and ready way to destroy him, you shall as near as you can find out his haunt, and the holes that are in the bank, and under the Roots of Trees where he lodgeth; and then take a great Eele, and slicing her back above her navil, put in three or four lumps of *Asnick*, and then stitch up the skin again, and so lay the Eele from the navil downward in the water, and from the navil upward out of the water: which when the Otter finds, it is his property to eat unto the navil, and no further: which if he do, it is certain that it is the last he will eat.

Next to the Otter, the Hern is a great devourer of Fish, especially the small fry, or that which lives in shallow places. Therefore to destroy the Hern, you shall take a strong Barbell hook, and bait it either with a Meneu, or a piece of Doggs flesh, colour your line green, and lay it in a shallow place made fast to some stake, where the Hern may wade to the knee to take it, and as soon as he hath swallowed it, he shall no more go from the place.

Now for as much as Fowl is a great destruction unto the young Spawn or Fry of Fish, it shall be good for the preservation thereof, to stake down into the bottom of your Ponds good long Kinds or Eggers of brush-wood, mixt with the boughs of green Willows, or Osters, in which the Fish casteth their spawn it will be a defence for them, till they be able to fly into better safety.

Next to the Horn the Water-Buff is a greater destroyer of young birds, and after the most part of the day Counties are, then it is found.

fish, especially Trouts, Crevisses, or any that lye in holes in the banks: the best way to destroy them is by hunting them with water Dogs, which is a very good sport, and I have seen twenty kill'd in an afternoon: but some do use to take them with hutches, or dead-falls, set in their haunts: but the former way is the better.

Next them, the Sea-Pye, and Sea-Mew is a great devourer or consumer of Fish, and there is no better way to take him than by setting Rods drest with water Lime, and set shoring on the edge of the water, one guess or row over another, in such places as the Water is most shallow; and upon some tufts of green Weeds, lay a fish for a bait under the Rods, at which he can no sooner strike, but he is presently taken.

Next these, the Kings Fisher (which is a small green Bird) is a greater destroyer of Fish, and the way to take him is to mark his haunt where he commonly sitteth, which is ever in some built next the River: then set a little Cradle of limed straws about his seat, and they will quickly take him, for he seldome changeth, but ever sitteth upon one bough.

Now to conclude, for the Cormorant, the More-hen, the Bald Coot, or the Ospray, which destroy all kind of Fish whatsoever, there is no way better to kill them, then by watching their haunts, to shoot at them with a Fowling piece, and in the breeding time of the year to destroy their nests.

CHAP. XVII.

Of the Ordering of Ponds for the nourishment of Fish.

THere is nothing that killeth Fish, or maketh them to prosper worke, than putrified and stinking waters: neither is there any thing which corrupteth Water sooner then weeds, Sedge, and such filthiness, being suffered to grow therein: Therefore it shall be good once in three years for to cleanse your Ponds of all manner of Weeds and Filth, which with a small Boat and sharp hook you may easily do at the fall of the leaf, for to cut them in the Spring doth increase them: Now if your Ponds be much subject to mud, as for the most part those in clay Countries are, then it shall

shall be good once in seven years to drain them, and lade them, and this would be done at the beginning of the Spring; and such Fish as you are willing and mean to preserve, you shall put into smaller pits or stews, and the other dispose at your pleasure: then causing the mud to be trodden with mens feet as you tread mortar, you shall see all the Helms rise aloft, which when you have taken also, then with shovels and trough Spades cast out all the mud and filth (which is a singular compost for Land) upon the bank: then sodde the bottom of the Pond; and the sides with green fodd, and fix them hard into the Earth with small stakes of Sallow, and these sides will nourish the Fish exceedingly.

This done, if your Pond have not any fresh Spring in it, then you shall lade the water back again into it, and then draining your stews, take out your store of Fish, and put them again into your Pond, observing ever that there be two parts spawners, and but a third melters.

These pits and small Stews, howsoever others write to the contrary, are better for feeding of Fish, then breeding: therefore you shall ever keep them with fresh water, and placing so one by another, that you may empty them at pleasure, once in three months renew their banks and bottomes with fresh soddes of the fruitfullest grass; also, you shall put into them good store of small Fry of Roch, Dace, Menew, Loch, and Miller-thumb; for the bigger Fish will feed thereon: also the inward Garbage and blood of Sheep, Calves, Hoggs, and such like, which will fat fish suddenly; for you must know, that as the Fish in Rivers have by vertue of the current ever something brought to them to feed on, so the Fish which is imprisoned in Ponds and wants that help, must either be relieved or else perish; and there is nothing better to feed them with, then that spoken of, or else Brewers Grains, chippings, curds, and any Corn whatsoever, thrown into the Ponds Morning and Evening.

CHAP. XVIII.

Of the best Water-Lime.

The best Water-Lime that can be made, and which will most surely hold within the water, is to take a pound of the strongest Bird-lime, and wash it in nine running Waters, untill there be no hardnes in it, and then beat out the water clean, and dry it. Which done, put it into an Earthen pot, and adde thereto as much Capons Grease as will make it run, two Spoonfuls of strong Vinegar, a very little Lamp Oyl, and Venice Turpentine, and boyl them all gently together upon a soft fire, stirring it continually. Then take it from the fire, and let it cool, then at any time when you mean to use it, warm it, and then anoint either your Rods, Bushes, Straws, or Lines, and no water will take away the strength.



Of the Fighting Cock.

CHAP. XIX.

Of the Choyce, Ordering, Breeding, and Dyeting of the Fighting Cock for Battel.

SINCE there is no pleasure more Noble, Delightsome, or void of couzenage and deceit then this pleasure of Cocking is; and since many of the best Wisdomes of our Nation have been pleased to participate with the delights therein, I think it not amiss, as well for the instruction of those which are unexperienced, as fortifying of them which have some knowledg therein, to declare in a few Lines the Election, Breeding, and Secrets of dyeting the Fighting Cock, which having been hitherto concealed and unwritten of, is (for our pleasure sake) as worthy of a generall Knowledge as any delight whatsoever.

To speak then first of the choyce of the Fighting Cock, you shall understand, That the best Characters you can observe in him is the Shape; Colour, Courage, and sharp heel.

For his shape, the middle and different size is ever accounted best, because they be ever most matchable, strong, nimble, and ready for your pleasure in his battel: and so the exceeding little Cock is as hard to match, and is commonly weak and tedious in his manner of Fighting. He would be of a proud and upright shape.

shape, with a small head, like unto a Spar-hawk, a quick large Eye, and a strong back, crookt and bigg at the setting on, and in colour suitable to the plume of his feathers, as black, yellow, or reddish. The beam of his legg would be very strong, and according to his Plume, Blew, Gray or Yellow; his spurs long, rough, and sharp, a little bending and looking inward.

For his Colour, the gray pyle, the yellow pyle, or the red with the black breast is esteemed the best: the pide is not so good, and the white and dun are the worst. If he be Red about the head, like scarlet, it is a sign of lust, strength and courage; but if he be pale, it is a sign of sickness and faintness.

For his Courage, you shall observe it in his walk by his treading, and the pride of his going, and in his pen by his oft crowing.

For the sharpnesse of his heel, or as Cock-masters call it, the narrow heel, it is only seen in his fighting, for that Cock is said to be sharp heel'd, or narrow heel'd, which every time he riseth hitteth, and draweth blood of his adversary, gilding (as they term it) his spurs in blood, and threatening at every blow an end of that Battail.

And these Cocks are surely of great estimation, for the best Cock-Masters are of opinion, that a sharp heel'd Cock, though he be a little false, is much better then the truest Cock which hath a dull heel, and hitteth seldomes; for though the one fight long, yet he seldome wounds, and the other though he will not endure the uttermost hewing, yet he makes a very suddain and quick dispatch of his business, for every blow puts his adversary in danger.

But that Cock which is both assuredly hard, and also very sharp heel'd, he is to be esteemed, and is of the most account above all other, and therefore in your general Election chase him which is of a strong shape, good colour, true valour, and of a most sharp and ready heel.

Now for the breeding of these Cocks for the battail, it is much differing from those of the dung-hill, for they are like Birds of prey, in which the female is ever to be preferred and esteemed before

The breeding
of the battail
Cock.

before the Male, and so in the breeding of these Birds, you must be sure that your Hen be right, that is to say, she must be of a right plume, as gray grissel, speckt or yellowish, black or brown is not amiss; she must be kindly unto her young, and of large body, well poked behind for large Eggs, and well tufted on the crown, which shews courage: if she have Weapons she is better, but for her valour it must be excellent, for if there be any sort of cowardise in her, the Chickens cannot be true.

And it is a Note amongst the best breeders, That the perfect Hen from a Dunghill Cock, will bring a good Chicken, but the best Cock from a Dunghill Hen can never get a good Bird; and I have known in mine own experience, that the two famousst Cocks that ever fought in these dayes, the one called *Noble*, the other *Grissel*, begot on many ill Hens very bad Cocks; but the most famous Hen *Jinks*, never brought forth ill Bird, how bad soever her Cock were.

Having then unto perfect Cocks got perfect Hens, (for that is the best breeding) you shall know, that the best season of the year to breed in, is from the encrease of the Moon in *February*, to the encrease of the Moon in *March*: for one *March* Bird is ever better worth than three at any other season. You shall place her pen in which she sitteth, to stand warm, and to make her bed offsoft and sweet straw, for they be much tenderer then the dunghill hens are; neither shall you suffer any other Fowl to come in her view where she sits, for it will move her to displeasure, and make her to endanger her Eggs.

You shall also observe in her sitting, whether she be busie to turn her Eggs, which is a good sign in a Hen) and if she be slack, you shall help her at such times as she riseth from her nest, and ever be sure that when she cometh from her nest, to have meat and water ready for her; lest being forced to seek her food, she suffer her Eggs to cool too much. Also, you shall have Sand, Gravel, and fine sifted ashes in the Room where she sitteth, in which she may bath and trim her self, at her pleasure.

After one and twenty daies is the time of their hatching, and if when they are new hatched, she do neglect to cover and keep the

the first warm till the rest be disclosed, you shall observe her and take those that are first opened, and lapping them in warm Woolf, lay them within the ayr of the fire till the rest be hatcht, and then put them all under her, and keeping both the Hen and them exceeding warm, for they be so tender, that the least cold will kill them, and suffer neither them nor the Hen to go abroad into the ayr till they be a moneth old; and let them have store of food, as Oat-meal, Cheese-parings, Chilter-wheat, and such like, and a large Room to walk in, the floor being boord; for the earth floor is too moyst, and the plaister-floor too cold.

After they are a moneth old, you shall let them walk in some grass Court or green place, where they may have store of Worms, but by all means be sure there be no stinking puddles of water in it; no sinks, nor filthy Channels, for it is the greatest poyson that can be to birds of this nature, and breedeth those Diseases which are most mortal: if every morning before they go forth, you perfume them and their Room with Rosemary, or Penny-royal burnt, it is a great preservation against all those infirmities; or to chop Leek blades amongst their meat is very good also.

In this sort you shall nourish them till you may distinguish the Cock-Chicken from the Hen, and then seeing their Comb or Wattels but appear, you shall cut them away, and so anoint the sore with sweet Butter till it be whole. This will make them have fine small, slender and smooth heads, whereas to suffer the Comb to grow to his bigness, and then cut it away, it will make him a gouty thick head, with great lumps: neither is the Flux of bloud wholesome for the least loss of bloud in a feathered Fowle exceeding mortal, and very dangerous.

You shall suffer your Cock-Chickens to go together with their Hens till they begin to fight, and peck one at another, but then you shall separate them, and disperse them into several walks, and that walk is the best for a Fighting Cock which is farthest from resort, as at Wind-Mills or Water-Mills, Grange-houses and such like, where he may live with his hens without the

offence

offence or company of other cocks. Lodges in Parks are also good, and so are Cony-Warrens, only they are a little too much haunted with vermine, and that is dangerous. Let the feeding place for your cocks be upon soft dry ground, or upon boards: for to feed upon paved earth, or on Plaster floors, will make their beaks weak, blunt, and not apt to hold fast. Any white corn is good food for a cock in his walk, and so are tofts or crusts of bread steeped in drink, or mans urine, for it will both scour and cool them inwardly.

If your chickens begin to crow (not being six months old) clear and lowd, or at unreasonable times, do not esteeme them, for it is an apparant sign of cowardise and fallhood: for the true cock is very long before he get his voyce, and when he hath it, he observes his hours with the best judgment. Unto your fighting cock three hens are sufficient, five are with the most, for they are so hot of nature, and will tread so much, that they soon consume their natural strength.

A cock would not be put to the battel before he be two years old, at which time he is perfect and compleat in every member: for to suffer him to fight when his spurs are but warts, you may well know his courage, but never his goodnesse.

You must also have an especial care to the Perch whereon your cock sitteth when he roosterth, for if it be too small in the gripe, or crooked, or so ill placed that he cannot sit but he must straddle with his legs, any of these faults will make uneven heeld, and whatsoever he was naturally, yet by this accident he will never be a good striker, for the making of the Perch either maketh or murrerth the Cock. Therefore to prevent this fault, the best way is to have in your roost a row of little Perches, not above seven or eight inches in length, and not a foot from the ground, so that your Cock may with ease go up to them, and being set, must of force have his legs stand neer together. It is a rule, that he which is a close siter, is even a narrow striker.

The footstool of the Perch be round & smooth, and about the bigness of a mans arm. Yet for your better knowledg, because words cannot so well expresse these quantities, it shall not be a-

mifs for you to go to some famous Cock-masters house, and view the Perches which are within his feeding Pens, and according to those proportions frame your own; for the Perch is the making and spoyling of any Cock whatsoever.

Again, you must be careful, that when your Cock doth leap from his Perch, that the ground be soft whereon he lighteth, for if it be hard or rough, it will make your Cock grow gowty, and put forth knots upon his feet.

The dyeting
of Cocks for
the battel.

Of taking up
Cocks.

Of the Cock-
Pen.

Of his diet.

Now lastly, for the dyeting and ordering of a Cock for a battel, which is a secret never yet divulged, but kept close in the breasts of some few; and forasmuch as in it only consisteth all the ground and substance of the pleasure, the best Cock undieted, not being able to encounter with the worst Cock that is dieted, you shall understand, that the time to take up your Cocks, is at the latter end of *August*, (for from that time till the later end of *May*, Cocking is in request) and having viewed them well, and seen that they are sound, hard feathered, and full summed, you shall put them into several pens, the models whereof you may behold in every Cock-masters, or Inn-keepers house, having a moving Perch in it, to set at which corner of the Pen you please.

This Pen should be made of very close boards well joynd together all but the fore-front, which would be made open like a grate, one bar two inches distant from another; and before the grate, two large troughs of soft wood, one for his meat, the other for his water. The door of the grate should be made to lift up and down, of such largeness, that you may with ease put your Cock in and out, and daily cleanse the Pen to keep it sweet and wholesome.

This Pen would be at least three foot in height, and two foot in square every way, and many of them may be joynd in one front, according to the bigness of the room, in which they are built: and also one above another, only with over-shadowing boards, so that one Cock may not see another.

When your Cock, as aforesaid, is put up into his Penne, shall for three or four dayes feed him only with old mancher crust pared away, and cut into little square bits, and you shall

give him to the quantity of a good handfull at a time, you shall feed him three times in a day, that is to say, at Sun-rise, at highest noon, and at Sun-set; You shall ever let him have before him the finest, coldest, and sweetest Spring-water that you can get.

After he hath been thus fed four days, and his Corn, Worms, Gravel, and other course feeding gone from him, in the Morning take him out of the Pen, and another Cock also, and putting a pair of Hots upon each of their heels, (which hot are soft bumballed rolls of Leather, covering their spurs, so that they cannot hurt or bruise one another,) and so setting them down on the green grass, let them fight and buffet one another a good space, as long as in their teaching they do not wound or draw blood one upon another; and this is called the sparring of Cocks; it heateth and chafeth their bodies, and it breaketh the fat and glut which is within them, and maketh it apt to cleanse and come away.

After your Cocks have sparred sufficiently, and that you see them pant, and grow weary, you shall take them up, and taking off their Hots, you must have deep straw baskets made for the purpose, with sweet soft straw to the middle, and then put in your Cock, cover him with sweet straw up to the top, and then lay on the lid close, and there let your Cock stowe and sweat till the Evening.

But yet before you put him into the stowe, you shall take Butter and Rosemary finely chopt, and white Sugar-candy, all mixt together, and give him a lump thereof as much as your thumb, and then let him sweat, for the nature of this scouring is to bring away his grease, and to breed breath and strength. You may in time of necessity, for want of these straw baskets, stow your Cock in a Cock-bag, by laying straw both under and above him, but it is not so good, because the Air hath more power to pass thorow it.

After four of the clock in the Evening, you may take your Cock out of the stowe, and licking his head and eyes all over with your tongue put him into his Pen, and then taking a good hand-bread small cut, put it into his trough, and then pilling in the trough also give it him to eat, so as he may take his bread

out of the warm Urine, for this will make his scouring work, and cleanse both his head and body wonderfully.

Now you shall understand, that the bread which you shall give him at this time, and at all other times during his dieting, shall not be manchet, but a special bread made for the purpose, in this manner; You shall take of Wheat-meal half a peck, and of fine Oat-meal flower as much, and mixing them together, knead them into a stiff paste with Ale, the white of a dozen Eggs, and half a pound of Butter, and having wrought the dowe exceeding well, make it into broad thin cakes, and being three or four dayes old, and the blisterings of the outside cut away, cut it into little square bits, and give it the Cock.

There be some others that in this bread will mix Licoras, Anniseeds, and other hot Spices, and will also in the Cock-water steep slices of Licoras; but it is not commendable, for it is both unnatural and unwholsome, and maketh a cock so hot at the heart, that when he comes to the later end of a battle, he is suffocated and overcome with his own heat: therefore I advise men of judgment, to take that for the best diet which is most natural, and least contrary unto the fowls ordinary feeding.

But to return to my former discourse, after you have fed your Cock thus for all night, you shall the next day let him rest, and only give him his ordinary feedings of bread and water, then the next day (which is the second day after sparring) you shall take him into a fair even green Close, and there setting him down, having some Dung-hill Cock in your arms, you shall shew it him, and so run from him, and entice him to follow you, and so chase him up and down half an hour at least, suffering him now and then to have a stroke at the Dung-hill Cock. And when you see that he is well heated and panteth, you shall take him up and bear him into your Cock-house, and there first give him this scouring; Take of Butter, which hath no salt, half a pound, and beat it in a Mortar with the leaves of Herb of grace, Hyssop, and Rosemary, till the herbs cannot be perceived, and that the Butter is brought to a green Salve, and of this give the Cock a rout

or two, as big as your thumb, and then stowe him in a basket, as is before said, till Evening, and then feed him as was formerly declared.

The next day you shall let him rest and feed, and the next day after, you shall sparre him again: and thus every other day for the first fortnight, you shall either sparre or chase your Cock, which are the most naturallest and kindliest heats that you can give him, and after every heat you shall give him a scouring: for this will break and cleanse from him all grease, glut and filthiness, which lying in his body, makes him purlie, faint, and not able to stand out the latter end of a battel.

Having fed your Cock thus the first fortnight, the second fortnight you shall also feed him in the same manner, and with the same foods; but you shall not sparre him, or give him heats above twice in a week at the most, insomuch, that thrice or four times in the fortnight will be sufficient, and each time you shall stowe and scour him according to the nature of his heats, that is to say, if you heat him much, you shall stowe him long, and give him of your scouring the greater quantity; if you find that he is in good breath, and needeth but slight heats, then you shall stowe him the lesse while, and give him the lesse of the scouring.

Now to the third fortnight, which maketh up the six Weeks compleat (being a time sufficient to prepare a Cock for the battail) you shall feed him as aforesaid, but you shall not sparre him at all, for fear of making his head tender or sore, neither give him any violent exercise, but only twice or thrice in the fortnight, moderately let him run and chase up and down, to maintain his wind, and now and then cusse a Cock, which you shall hold to him in your hands; which done, you shall give him his scouring well rounded in the powder of Sugar-Candy, white or brown, but brown is the better, for the Cock then being come to perfect breath, and having no filth in his body for the scouring to work on, it will work and cause operation upon the vital parts, and make the Cock sick, which the Sugar-candy will prevent, and strengthen Nature against the Medicint.

After

After the end of six weeks feeding, finding your Cock in lust and breath, you may fight him at your pleasure, observing that he have at least three dayes rest before he fight, and well emptied of his meat before you bring him into the Pit.

The matching
of Cocks.

Now when you bring him into the Pit to fight, you must have an especial care to the matching of him, for in that art consisteth the greatest glory of the Cock-master, for what availeth it to feed never so well, if in the matching you give that advantage which overthroweth your former labour? Therefore in your matching there are two things to be considered; that is, the length of cocks, and the strength of cocks; for if your Adversary's Cock be too long, yours shall hardly catch his head, and then he can never endanger eye nor life: and if he be the stronger, he will overbear your Cock, and not suffer him to rise, and strike with any advantage: therefore for the knowledg of these two rules, though experience be the best Tutor, yet the first, which is length, you shall judge by your eye, when you gripe the Cock about the waste, and make him stoor out his legs, in which posture you shall see the utmost of his height, and so compare them in your judgment. Now for his strength, which is known by the thickness of his body, (for that Cock is ever held the strongest, which is the largest in the garth) you shall know it by the measure of your hands, griping the Cock about from the points of your great finger, to the joynts of your thumbs, and either of these advantages by no means give to your adversary; but if you doubt loss in the one, yet be sure to gain in the other: for the weak long Cock will rise at more ease, and the short strong Cock will give the surer blow; so that because all Cocks are not cast into a mould, there may be a reconciliation of the advantages, yet by all means give as little as you can.

Of preparing
Cocks to the
fight.

When your Cock is equally matcht, you shall thus prepare him to the fight; first, with a pair of fine Cock shears, you shall cut all his main off, close unto his neck, even from his head, unto the setting on of his shoulders, then you shall clip off all the feathers from his tail, close unto his Rump, where the more scarlet that you see in his Rump, in the better estate of body the Cock is. Then you shall take his wings, and spreading them forth

forth by the length of the first feather of his rising wing clip the rest slope wise with sharp points, that in his rising he may therewith endanger the eye of his adversary: then with a sharp knife you shall scrape smooth and sharpen his spurs.

Lastly, you shall see that there be no feathers about the crown of his head for his foe to take hold on, and then with your spittle, moistning his head all over, turn him into the Pit to move his fortune. When the battail is ended, the first thing you do, you shall search his wounds, and as many as you can find, you shall with your mouth suck the blood out of them, then wash them very well with warm urine, to keep them from rankling, and then presently give him a roul or two of your best scouring, and so stowe him hot as you can, both with sweet straw and blanketing, in a close basket for all that night; then in the morning take him forth, and if his head be much swell'd, you shall suck his wounds again, and bath them with warm Urine, then having in a fine bag the powder of the herb *Robert*, well dried, and finely seift, pounce all the sore places therewith, and then give the Cock a good handful of bread to eat, out of warm urine, and so put him into the stowe again, in the same manner as before mentioned, and by no means let him feel the air untill all the swelling be gone; but twice a day suck his wounds, dresse him and feed him, as is afore said.

But if he have received any hurt, or blemish in his eye, then you shall take a leaf or two of right ground Ivy, (not that which runneth along the ground, and is of the ignorant so called, but that which grows in little tufts in the bottome of hedges, and is a little rough leaf,) and having chewed it very well in your mouth, and sucked out the juyce, spit it in the eye of the Cock, and it will not only cure it of any wound, or any blow in the eye, where the sight is not pierced, but also defend it from the breeding of Films, Hawes, Warts, or any such other infirmities which quite destroy the sight: Observing that you do not cease to dresse the eye therewith so long as you shall perceive any blemish therein.

Now if your Cock have in his sight veyned himself, either by narrow striking, or other crosse blow, you shall find out the wound and

The ordering
of Cocks after
battail, and the
curing them.

and presently bind thereunto the fine soft down of a Hare, and it will both staunch it and cure it.

For any other casual infirmity or sicknesse which shall happen unto Cocks, look in the former Book called *Cheap and Good*, and you shall find them set down at large; only I will give you this one small remembrance, That after you have put forth you wounded Cocks to their walks, and come to visit them a moneth or two after, if you find about their head any swollen bunches, hard and blackish at one end, you shall know that in such bunches are unsound cores; therefore presently with your knife you shall open the same, and crush out the cores with your thumbs, then with your mouth suck out all the corruption, and then fill the holes full of fresh Butter, and it will cure them. And thus much for the nature of the Cock, and how to keep him for his best use.

FINIS.

The Table of the Country Contentments.

O F Hunting in general, and all the particular knowled- ges belonging thereunto. p. 1	Best hours of feeding	15
The necessity and use of recrea- tion	A proportion of meat	ib.
The praise of Hunting	Ordering of Hounds after hunt- ing,	16
What Hunting is	The curing of diseases in hounds	ibid.
The diversities of chases	Of killing Fleas and Lice	ib.
The diversities of Hounds	To kill worms	ib.
The colour of Hounds	Biting with venomous Beasts	17
The shape and proportion of Hounds	Biting with a mad dog	ib.
The composition of kennels	Of a mad dog, and the signs	ib.
The middle siz'd Dog for cun- ning	Of gauling	ib.
For sweetness of cry	Of a Tetter	18
For loudness of cry	For the Itch	ib.
For deepness of cry	For the mangy or scab	ib.
For training of Horses	Of Wounds	ib.
A good Caveat to Gentlemen	Of a Canker in the Ear	ib.
Objection against swift bounds.	Of surbaiting	19
The answer to the objection	Of bruises	ib.
Correction of swift bounds faultis	For the Stone	ib.
	For costiveness	ib.
Of high-way Hounds	For any diseases in the Ears	ib.
The kennel for exercise of the body	For sore Eyes	ib.
Of the Hounds kennel	For broken bones	20
The situation of the kennel	Of the breeding of Hounds	ib.
Of feeding of Hounds	Hounds must suite one another.	ib.
Diversities of meats	The months to breed in	ib.
The manner of feeding.	Under which signs to breed	21
Meat for sick & weak bounds	Ordering of bratches after whel- ping	ib.
	When to wean whelps	ib.
	How to enter whelps	ib.
	N n	Obser.

The Table.

Observations in the entring of whelps	21	To bring Hawks inward	ib.
Of chases in general	23	Faults in shortwinged Hawks	ib.
Of the stag and his profits.	ib.	Of turning tayl	ib.
How to know an old Stag.	24	If a Hawk shall not flie at all.	ib.
The casting of beads	ib.	Too much fondness of the man.	25
How to find a Stag.	ib.	Mewing of long-winged Hawks	ibid.
The hunting of the Stag	25	Mewing at the stone.	ib.
To know when a Stag is weary	ib.	Mewing at large	ib.
Of the Buck	26	Mewing of short-winged Hawks	ib.
Of the Hare	ib.	When to draw Hawks	36
Of her profits	ib.	Diseases in Hawks	ib.
The hunting of the Hare	ib.	Of coursing with Greyhounds	ib.
Where to find Hares	ib.	Breeding of Grey-hounds	ib.
The knowledg of the Hares form	27	Best place for breed	37
The Hares flights and shifts.	ib.	The best Greyhound	ib.
The Hunting of the Fox and Badger	28	Nimbleness in Greyhounds	ib.
Of Hawking with all sorts of Hawks	29	Difference betwixt dogs and bit- ches	38
Kinds of Hawks	ib.	Dogs and Bitches for breed	ib.
The flight of Hawks	ib.	The shape of Greyhounds	ib.
The ordering of Hawks	ib.	Dyeting of Grey-hounds for the course	39
The managing of Hawks	30	Of what diet consisteth	ib.
The luring of Hawks	ib.	Of food	ib.
Bathing of Hawks	ib.	Of general food	40
The enseaming, giving, casting, and scouring	31	Of particular food	ib.
Of flying at the Pheasant or Par- tridge	ib.	Food for a match	ib.
Of flying at foul	32	Hours of seeding	ib.
Helps for faults in long-winged Hawks	33	Of exercise by coursing	41
Of the stand	ib.	Ordering dogs after coursing.	ib.
Against forwardness	ib.	Of airing	ib.
To make a Hawk inward	34	Kennelling the Greyhound	43
To keep a Hawk in high flying	ib.	The Lawes of coursing	ib.
		Of divers other particular re- creations.	45

Shooting

The Table.

ib.	<i>Shooting in the long-bow</i>	ib.	<i>The angling for several Fish,</i>	71
ib.	<i>Of shooting in Cross-bowes</i>	46	<i>Of the Gudgeon</i>	ib.
ib.	<i>Of bowling.</i>		<i>The Carp</i>	72
ib.	<i>Of Tennis and Balloon balls</i>	ib.	<i>The Chub, Chenny, &c.</i>	ib.
ib.	<i>The whole art of Angling</i>	47	<i>The Eele, Flounder, &c.</i>	73
ib.	<i>The use of Angling</i>	ib.	<i>The Grayling, Bream and Tench</i>	ib.
ib.	<i>The antiquity</i>	49		ib.
ib.	<i>Of the angle rods, lines, corks,</i>		<i>The Pike, Bleak, &c.</i>	74
ib.	<i>&c.</i>	ib.	<i>Of Snickling the Pike</i>	75
ib.	<i>Of the top of the Angle-rod</i>	50	<i>Of the Salmon</i>	ib.
ib.	<i>Angle-rod of one piece</i>	51	<i>The taking of Fish without An-</i>	
ib.	<i>Angle-rod of many pieces</i>	ib.	<i>gle</i>	76
ib.	<i>The line</i>	52	<i>Preserving of Fish from devon-</i>	
ib.	<i>Colouring of lines</i>	53	<i>ers</i>	77
ib.	<i>Of the Cork</i>	55	<i>Ordering of fish ponds</i>	78
ib.	<i>Of angle hooks</i>	56	<i>The best water-lime</i>	80
ib.	<i>Of other implements</i>	58	<i>Of the fighting Cock</i>	81
ib.	<i>Of the Anglers inward quality</i>		<i>The choice of Cocks</i>	ib.
ib.		59	<i>Breeding of Cocks</i>	82
ib.	<i>Anglers apparel</i>	ib.	<i>Dieting of Cocks</i>	86
ib.	<i>Anglers virtues</i>	ib.	<i>Taking up of Cocks</i>	ib.
ib.	<i>Certain Cautions</i>	60	<i>The Cock-pen</i>	ib.
ib.	<i>Best and worst seasons to angle in</i>		<i>Of Sparring</i>	87
ib.		63	<i>Of Diet-bread</i>	ib.
ib.	<i>The Anglers manner of standing</i>		<i>The first fortnights keeping</i>	ib.
ib.		ib.	<i>The second fortnights keeping,</i>	
ib.	<i>Of Fishes haunts</i>	65		89
ib.	<i>Objections and Answers</i>	66	<i>The third fortnights keeping,</i>	
ib.	<i>Of baits in general</i>	67		ib.
ib.	<i>Seasons for baits</i>	ib.	<i>The matching of a Cock</i>	96
ib.	<i>Of Flies</i>	68	<i>Preparing Cocks to fight</i>	ib.
ib.	<i>Preservation of baits</i>	69	<i>Ordering of Cocks after battel,</i>	
ib.	<i>Of Pastes</i>	70		97

FINIS.

1. The first part of the book is devoted to a general
2. description of the country and its inhabitants.
3. The second part contains a detailed account of the
4. various tribes and their customs.
5. The third part is a history of the country from
6. the earliest times to the present.
7. The fourth part is a description of the natural
8. history and resources of the country.
9. The fifth part is a description of the political
10. and social condition of the country.
11. The sixth part is a description of the
12. religious and moral condition of the country.
13. The seventh part is a description of the
14. literary and scientific condition of the country.
15. The eighth part is a description of the
16. military and naval condition of the country.
17. The ninth part is a description of the
18. commercial and industrial condition of the country.
19. The tenth part is a description of the
20. financial condition of the country.

THE ENGLISH House-Wife,

CONTAINING

The inward and outward Vertues which
ought to be in a Compleat WOMAN.

As her Skill in *Physick, Chirurgery, Cookery, Extraction of Oyls, Banqueting stuff, Ordering of great Feasts, Preserving of all sort of Wines, conceited Secrets, Distillations, Perfumes, Ordering of Wool, Hemp, Flax: Making Cloth and Dying; The knowledge of Dayries: Office of Malting; of Oats, their excellent uses in Families: Of Brewing, Baking, and all other things belonging to an Household.*

A *Work* generally approved, and now the
Eighth time much Augmented, Purged, and made most
profitable and necessary for all men, and the general good
of this NATION.

By G. Markham.

L O N D O N,

Printed for George Sawbridge, at the Sign of the Bible on
Ludgate Hill. 1675.



TO THE RIGHT
HONOURABLE

And most Excellent Lady,

FRANCES, Countess Dowager
OF EXETER.

Howsoever, (Right Honourable and most vertuous Lady) this Book may come to your Noble goodness clo hed in an old name or garment, yet doubtless, (Excellent Madam) it is full of many new vertues, which will ever admire and serve you; and though it can adde nothing to your own rare and unparallelled knowledge, yet may it to those noble good ones, (which will indeavour any small spark of your imitation) bring such a light as may make them shine with a great deal of charity. I do not assume to my self, (though I am not altogether ignorant in ability to judge of these things) the full invention, and scope of this whole work: for it is true, great Lady, that much of it was a Manuscript, which many years agoe belonged to an Honourable Countess, one of the greatest Glories of our Kingdom, and were the opinions of the greatest Physicians which then lived; which being now approved

The Epistle.

proved by one not inferiour to any of the profession, I was the rather imboldned to send it to your blessed hand, knowing you to be a Mistress so full of Honourable piety and goodnesse, that although this imperfect offering may come unto you weak and distable, yet your noble vertue will support it, and make it so strong in the world, that I doubt not but it shall do service to all those which will serve you, whilst my self and my poor prayers shall to my last gasp labour to attend you.

The true admirer of your
Noble Vertues,

Gervase Markham.

THE TABLE.

CHAP. I.

THe inward-vertues of the
House-wife p. 2.
Her garments p. 3.
Hr dyes and general
vertues p. 4.

Vertes and their kinds p. 4, 44.

To make one sweat p. 7, 9.

A preservatiue against the plague
p. 8.

A Cordial against infection p. 9.

To draw a Plague botch to any
place p. 9.

For the Head-ach p. 9, 14.

For the Frenzy p. 9.

For the Letbargy p. 9.

To provoke sleep p. 10.

For the swimming of th. head
p. 10.

For all colds and coughs p. 10,
17.

For the Palsie p. 10.

For the Falling-sickness p. 11.

To help bearing p. 14.

For the Rheume p. 14.

For stinking breath p. 12.

For the Tooth-ach p. 12, 14.

For all sore eyes p. 13, 14, 16.

For a Canker p. 13.

For swelling in the mouth ib.

For the Quinsy or the Squinan-
ty ib.

For drunkenness ib.

To quicken wit p. 14.

For the Kings-evil ib.

To stanch bleeding p. 14.

20, 22.

To draw out bones p. 14.

For the falling of the Mould of
the head p. 14.

For any venome in the ear p. 15.

For stinking nostrils p. 15.

To make hair grow p. 17.

For a Sance face ib.

For hardness in the throat ib.

For the Tytick p. 18.

For grief in the St mach p. 18.

For spitting blood ib.

For vomiting p. 18, 19.

For the Iliac passio p. 19.

Additions to the diseases of the
Stomach ib.

For pain in the brest ib.

For the Mother ib.

Obstructions in the Liver p. 19.

For the Pleurisie p. 22.

For a Stitch ib.

For any Consumption p. 20.

For the Jaundise p. 21.

Additions to the diseases of the
liver ib.

For a Ring-worm 22.

For the Dropfie 22.

For the Spleen ib.

For pain in the side ib.

For

The TABLE.

For <i>fatness</i> and <i>short breath</i> <i>ib.</i>	For <i>sore breasts</i> <i>p. 32.</i>
<i>Additions to the diseases of the spleen</i> <i>p. 23.</i>	For <i>women in Childbed</i> <i>p. 32.</i>
For the <i>Diseases of the Heart</i> <i>p. 23.</i>	For the <i>Morbi</i> <i>ib.</i>
For the <i>wind Cholick</i> <i>p. 23, 25.</i>	For the <i>Gout</i> <i>ib.</i>
For a <i>lask</i> <i>p. 23.</i>	For the <i>Sciatica</i> <i>p. 33.</i>
For the <i>bloody flux</i> <i>p. 24, 25.</i>	For the <i>stinging of venomous beasts</i> <i>p. 33, 38.</i>
For <i>Cestiveness</i> <i>p. 24.</i>	For <i>should legs</i> <i>p. 33.</i>
For <i>worms</i> <i>ib.</i>	For <i>old and new sores</i> <i>p. 33.</i>
<i>Additions to the diseases in the belly</i> <i>p. 25.</i>	For <i>scabs and itch</i> <i>p. 34, 39.</i>
<i>Hardness of the belly</i> <i>ib.</i>	For the <i>Leprosie</i> <i>p. 34.</i>
For the <i>stopping of the womb</i> <i>p. 26.</i>	For <i>pimples</i> <i>ib.</i>
For the <i>Rupture</i> <i>ib.</i>	<i>Privy parts burnt</i> <i>35.</i>
For the <i>Stone</i> <i>p. 26, 27, 28.</i>	For <i>any burning</i> <i>p. 35, 36, 37.</i>
To help <i>Vertus</i> <i>p. 27.</i>	For <i>scalding</i> <i>p. 35.</i>
For the <i>Strangulation</i> <i>p. 28.</i>	To <i>eat away dead flesh</i> <i>p. 35.</i>
<i>Additions to the Diseases of the reins</i> <i>p. 29.</i>	For <i>sinews cut or forunk</i> <i>p. 36.</i>
For the <i>Gonorrhoea</i> <i>ib.</i>	To <i>break an Impostume</i> <i>p. 36.</i>
For the <i>weakness in the back</i> <i>ib.</i>	For a <i>Ring-worm</i> <i>p. 38.</i>
For the <i>Hemorrhoids</i> <i>ib.</i>	To <i>take away scars of the Small Pox</i> <i>p. 39.</i>
For the <i>falling of the Fundament</i> <i>p. 30.</i>	For the <i>French Pox</i> <i>p. 39.</i>
<i>Additions to the diseases of the privy parts</i> <i>p. 30.</i>	<i>Additions to green wounds</i> <i>pag. 40, 41.</i>
For the <i>Green-sickness</i> <i>ib.</i>	For <i>pricking with a thorn</i> <i>p. 41.</i>
To <i>increase Womens milk</i> <i>ib.</i>	<i>Additions for aches and swellings</i> <i>p. 41.</i>
To <i>dry up milk</i> <i>p. 31.</i>	For <i>pain in joynts</i> <i>p. 42.</i>
For <i>ease in Child-bearing</i> <i>ib.</i>	<i>Additions to grief in the bones</i> <i>p. 42, 43.</i>
For the <i>dead Child</i> <i>ib.</i>	A <i>Bath to clear the skin</i> <i>p. 43.</i>
For <i>apiness to conceive</i> <i>ib.</i>	The <i>oil of Swallows</i> <i>p. 44.</i>
<i>Additions to womens infirmities</i> <i>ib.</i>	<i>Oil of Camomile</i> <i>p. 45.</i>
For the <i>flowers</i> <i>ib.</i>	<i>Oil of Lavender</i> <i>p. 45.</i>
For the <i>Matrix</i> <i>ib.</i>	To <i>make smooth hands</i> <i>p. 45.</i>
	To <i>make Dr. Stevens water</i> <i>ib.</i>

The TABLE

To make Rosa-solis	p. 46.
Additions to Oyls	p. 47.
To make Oyl of Roses or Violets	p. 47.
Oyl of Nutmegs	ib.
Oyl of Spike	p. 48.
Oyl of Mastic	p. 48.

CHAP. II.

T He outward and active knowledge of the House-wife	p. 49.
Knowledge of herbs	ib.
Stillies Gardens	p. 50.
Of Salts simple and compound	p. 52, 53, 54.
Of Traits of all kinds	p. 55, 57.
Of Quelquechofes	p. 58.
Puddings of all kinds	p. 58, 59.
Boyl meats of all kinds	p. 61.
	to 63.
The Oleopothrido	p. 63.
Additions to boyled meats	p. 66.
Roast meats of all kinds	p. 68, &c.
Observations in Roast meats	pag. 61.
Spitting of meats	p. 61.
Temperance of fire	p. 61.
Compuſtion of meats	p. 61.
Dressing of meats	p. 61.
To know when meats are enough	pag. 62.
Ordering of meats to be roasted	p. 66.
Sauces of all kinds	p. 67, 68.
Additions to Carbonadoes	p. 71.
Dressing of Fiſh	p. 72.
Of the paſtery and bakt meat	p. 73.

Mixture of paſtes	p. 74.
Of puff-paſts	p. 74.
Additions to the paſtery.	p. 77,
	78, 79, &c.
To recover Veniſon tainted	p. 80.
To preſerve Quinces to bake	p. 82.
Of Tarts	p. 82, to 87.
Of White-Pots	p. 87.
Of banquetting ſtuff of all kinds	p. 87, 88, &c.
Of divers waters	p. 99.
To make any Conſerve	p. 99.
Additions to Banquetting ſtuff	p. 95.
To make Ipocras	p. 95.
To candy anything	p. 97.
Ordering of banquets	p. 97.
Ordering of great feaſts	p. 98.

CHAP. III.

O F Diſtillations and their	
vertues, from	p. 101, 10
	109.
The vertues of ſeveral waters	pag. 106.
Of perfuming	p. 100, 109.
To make Pomanders	p. 109.
To make Vinegar	p. 110.
To make Verjuyce	ib.
Additions to conceited ſecrets	ib.
To perfume Gloves	111.

CHAP. IV.

T He ordering, preſerving, and	
helping of all ſorts of Wines	p. 112, to 121.
Of	

The TABLE

Of gaging
To choose Wines

p. 118.
p. 117.

of,

p. 153. to 175.

CHAP. V.

OF Wool, Hemp, Flax, Cloth,
and dying of all Colours
from p. 122. to p. 140.

CHAP. VI.

OF Dairies, Butter, Cheese,
&c. from p. 140. to 153.

CHAP. VII.

THe Office of the Malister, the
Secrets and knowledge there-

CHAP. VIII.

THe Excellency of Oates, the
Vertues and uses thereof,
from p. 175. to 181.

CHAP. IX.

THe Office of the Brew-house,
and the Bake-house, and the
uses, from pag. 181.
to the end.

To make Perry, and Cider, pag.
184.

THE
APPROVED BOOK
CALLED

The English House-wife.

CONTAINING

All the vertuous Knowledges and Actions both of Mind and Body, which ought to be in any Compleat House-wife of what degree or Calling soever.

THE SECOND BOOK.

CHAP. I.

Of the inward vertues of the mind, which ought to be in every House-wife. And first of her general knowledge both in Physick and Chirurgery, with plain approved medicines for health of the House-hold, also the extraction of excellent Oyls fit for those purposes.

HAVING already in a summary Briefness passed through those outward parts of Husbandry which belong unto the perfect Husbandman, who is the Father and Master of the Family, and whose Office and employments are ever for the most part abroad, or removed from the house, as in the field or yard: It is now meet, that we descend in as orderly Method as we can, to the office of our English House-wife, who is the Mother and Mistress of

Bbb

the

the family, and hath her most general imployments within the house; where from the general example of her vertues, and the most approved skill of her knowledge, those of her Family, may both learn to serve God, and sustain man in that godly and profitable sort, which is required of every true Christian.

A House-wife
must be reli-
gious,

First then, to speak of the virtues of her mind, she ought, above all things, to be of an upright and sincere Religion, and in the same both zealous and constant, giving by her example an incitement and spur unto all her Family to pursue the same steps, and to utter forth by the instruction of her life, those virtuous fruits of good living, which shall be pleasing both to God and his Creatures. I do not mean that herein she should utter forth that violence of spirit, which many of our (vainly accounted pure) women do, drawing a contempt to the ordinary Ministry, and thinking nothing lawful but the fantasies of their invention, usurping to themselves a power of preaching and interpreting the Holy Word, to which onely they ought to be but hearers and believers, or at the most but modest perswaders; this is not the office either of good Housewife, or good woman. But let your English Housewife be a godly, constant, and Religious woman, learning from the worthy Preacher and her Husband those good Examples which she shall with all careful diligence see exercised amongst her Servants.

In which practise of hers, what particular rules are to be observed, I leave her to learn of them who are professed Divines, and have purposely written of this argument; only thus much I will say, which each ones experience will teach him to be true, that the more careful the master and mistress are to bring up their Servants in the daily exercises of Religion toward God, the more faithful they should find them in all their business towards men, and procure Gods favour the more plentifully on all the household: and therefore a small time, morning and evening bestowed in prayers, and other exercises of Religion, will prove no lost time at the weeks end.

Shee must be
temperate.

Next unto her sanctity and Holiness of life, it is meet that

That our English Housewife be a woman of great modesty and temperance, as well inwardly as outwardly; Inwardly, as in her behaviour and carriage towards her Husband, wherein she shall shun all violence of rage, passion and humour, coveting less to direct than to be directed, appearing ever unto him pleasant, amiable, and delightfull; and, though occasion of mishaps, or the mis-government of his will may induce her to contrary thoughts, yet vertuously to suppress them, and with a mild sufferance rather to call him home from his error, than with the strength of anger to abate the least spark of his evil, calling into her mind, that evil and uncomely language is deformed, though uttered even to Servants; but most monstrous and ugly, when it appears before the presence of a Husband: Outwardly, as in her apparel and dyet, both which she shall proportion according to the competency of her Husbands estate and calling, making her circle rather strait than large: for it is a rule, if we extend to the uttermost, we take away increase; if we go a hairs breadth beyond, we enter into consumption: but if we preserve any part, we build strong forts against the adversaries of fortune, provided that such preservation be honest and conscionable: for as lavish prodigality is brutish, so miserable covetousness is hellish. Let therefore the Housewifes garments be comely and strong, made as well to preserve the health, as to adorn the person, altogether without toyish garnishes, or the gloss of light colours, and as far from the vanity of new and fantastick fashions, as neer to the comely imitation of modest Matrons. Let her dyet be wholsom and cleanly, prepared at due hours, and cook'd with care and diligence, let it be rather to satisfy nature, then her affections, and apter to kill hunger than revive new appetites; let it proceed more from the provision of her own yard, than the furniture of the Markets, and let it be rather esteemed for the familiar acquaintance she hath with it, than for the strangeness and rarity it bringeth from other countries.

Other Carements.

Of her Dyet.

Her general Vertues.

To conclude, our English Housewife must be of chaste thoughts, stout courage, patient, untired, watchful, diligent, witty, pleasant, constant in friendship, full of good Neighbour-hood, wise in discourse, but not frequent therein, sharp and quick

of speech, but not bitter or talkative, secret in her affairs, comfortable in her Counsels, and generally skilful in the worthy knowledges which do belong to her vocation; of all or most whereof, I now in the ensuing discourse intend to speak more largely.

Of her vertues
and her know-
ledge in Phy-
sick.

To begin then with one of the most principal vertues which do belong to our English House-wife; you shall understand, that sith the preservation and care of the family touching their health and soundness of body consisteth most in the diligence of her, it is meet that she have a physical kind of knowledge, how to administer any wholsom receipts or medicines for the good of their healths, as well to prevent the first occasion of sickness, as to take away the effects and evil of the same, when it hath made seizure on the body. Indeed we must confess, that the depth and secrets of this most excellent Art of Physick, are far beyond the capacity of the most skilful woman, as lodging only in the brest of learned Professors, yet that our Housewife may from them receive some ordinary rules and medicines, which may avail for the benefit of her family, is (in our common experience) no derogation at all to that worthy Art. Neither do I intend here to load her mind with all the symptoms, accidents, and effects which go before or after every sickness, as though I would have her to assume the name of a Practitioner, but only relate unto her some approved medicines, and old Doctrines which have been gathered together, by two excellent and famous Physicians, and in a Manuscript given to a great worthy Countess of this Land, (for far be it from me to attribute this goodness unto mine own knowledge) and delivered by my common and ordinary experience, for the curing of those ordinary sicknesses which daily perturb the health of men and women.

Dr. Barker.
Dr. Bomelius.

Of Feavers in
general.

First then, to speak of Feavers or Agues, the House-wife shall know those kinds thereof, which are most familiar and ordinary as the *Quotidian* or daily Ague, the *Tertian* or every other dayesague, the *Quartan* or every third days ague, the *Pestilient*, which keepeth no order in his fits, but is more dangerous and mortal. And lastly, the accidental Feaver, which proceedeth from the receipt of some wound, or other painful Perturbation.

of

of the spirits. There be sundry other Feavers, which coming from consumptions, and other long continued sicknesses, do altogether surpass our House-wives capacity.

First then, for the *Quotidian* (whose fits always last above twelve hours) you shall take a new laid Egg, and opening the crown, you shall put over the white, then fill up the shell with good *Aquavite*, and stir it and the yolk very well together, and then as soon as you feel your cold fit begin to come upon you, sup up the egg, and either labour till you sweat, or else laying great store of cloths upon you, put your self in a sweat in your bed; and thus do while your fits continue; and for your Drink, let it be only Posset-ale. Of the Quotidian.

For a single *Tertian* feaver, or each other days ague, take a quart of Posset-ale, the Curd being well drained from the same, and put thereunto a good handful of *Dandelion*; and then setting it upon the fire, boil it till a fourth part be consumed, then as soon as your cold fit beginneth, drink a good Draught thereof; and then either labour till you sweat, or else force your self to sweat in your bed; but labour is much the better, provided that you take not cold after it, and thus do while your fits continue, and in all your sickness let your drink be posset-ale thus boyled with the same herb. Of the single Tertian.

For the accidental Feaver, which cometh by means of some dangerous wound received, although for the most part it is an ill sign, if it be strong and continuing, yet many times it abateth, and the party recovereth when the wound is well tended and comforted with such several balms and hot oyls; as are most fit to be applied to the member so grieved or injured: therefore in this Feaver you must respect the wound from whence the accident doth proceed, and as it recovereth, so shall you see the Feaver wast and diminish. Of the accidental Feaver.

For the *Hectique* Feaver, which is also a very dangerous sickness, you shall take the oyl of Violets, and mix it with a good quantity of the powder of white *Poppy-seed* finely sear'd, and therewith anoint the small and reins of the parties back, evening and morning, and it will not only give ease to the Feavers but also purge and cleanse away the dry scalings, which is ingendred either by this, or any other Feaver whatsoever. Of the Hectique.

For

For the quartan, or for any fever.

Of thirst in fevers.

For any Feaver whatsoever, whose fit beginneth with a cold, take a spoonful and a half of Dragon water, a spoonful of Rose-water, a spoonfull of running water, a spoonful of *Aqua visa*, a spoonful of Vinegar, and half a spoonful of *Mithridate*, or less, and beat all these well together, and let the party drink it before his fit begin.

It is to be understood, that all Feavers of what kind soever they be, and these infectious diseases, as Pestilence, Plague, and such like, are thought the inflammation of the blood, and infinitely much subject to drought; so that should the party drink so much as he desired, neither could his body contain it, nor could the great abundance of Drink do other then weaken his stomach, and bring his body to certain destruction.

Wherefore when any man is so overpressed with desire of drink, you shall give him at convenient times, either Posset-ale made with cold herbs, as Sorrel, Purslane, Violet-leaves, Lettuce, Spinage, and such like, or else a Julip made as hereafter, in the Pestilent Feaver, or some Almond milk; and betwixt those times, because the use of these Drinks will grow wearisome and loathsome to the patient, you shall suffer him to gargle in his mouth good wholsome beer or ale, which the patient best liketh, and having gargled it in his mouth, to spit it out again, and then to take more: and thus do as oft as he pleaseth, till his mouth be cooled: provided, that by no means he suffer any of the drink to go down; and this will much better assuage the heat of his thirst, than if he did drink; and when appetite desireth drink to go down, then let him take either his Julip or his Almond milk.

For any Ague fore.

To make a Pultis to cure any Ague-fore, take Elder leaves, and seeth them in milk till they be soft, then take them up and strain them, and then boyl it again till it be thick, and so use it to the fore as occasion shall serve.

The quartane Fever.

For the Quartane Feaver, on third day Ague, which is of all Feavers the longest lasting, and many times dangerous Consumptions, black Jaundice, and such like mortal sicknesses follow it: you shall take *Mithridate*, and spread it upon a Lemon-slice, cut of a reasonable thickness, and so as the Lemon be

be covered with the Mithridate; then bind it to the pulse of the sick man's wrist of his arme, about an hour before his fit doth begin, and then let him go to his bed warm, and with hot cloths laid upon him; let him try if he can force himself to sweat; which if he do, then half an hour after he hath sweat, he shall take hot Possét-ale, brewed ith a little Mithridate, and drink a good draught thereof, and rest till his fit be passed over, but if he be hard to sweat; then with the said Possét-ale also you shall mix a few bruised Anniseeds, and that will bring sweat upon him: and thus you shall do every fit till they begin to cease, or that sweat come naturally of its own accord, which is a true and manifest sign that the sickness decreaseth.

To make a
Sweat.

For the Pestilent Feaver, which is a continual sickness full of infection and mortality, you shall cause the party first to be let blood if his strength will bear it: then you shall give him cool Julips made of Endive or Succory water, or the Syrup of Violets, conserve of Barberies, and the juice of Lemmons well mixed and symbolized together.

The pestilent
Feaver.

Also you shall give him to drink Almond-milk, made with the decoction of cool herbs, as Violet-leaves, Strawberry leaves, French mallows, purslane, and such like; and if the parties mouth shall through the heat of his Stomach, or liver, inflame or grow sore, you shall wash it with the Syrup of Mulberries, and that will not only heal it, but also strengthen his stomach. If (as it is most common in this sickness) the party shall grow collicive, you shall give him a Suppository made of Honey, boyl'd to the height of hardness, which you shall know by cooling a drop thereof, and so if you find it hard, you shall then know that the honey is boyl'd sufficiently; then put Sale to it, and so put it in water, and work it into a roul in manner of a Suppository, and administer it, and it most assuredly bringeth no hurt, but ease to the party, of what age or strength soever he be: during his sickness you shall keep him from all manner of strong Drinks, or hot spices, and then there is no doubt of his recovery.

To preserve your body from the infection of the plague, you shall take a quart of old Ale, and after it hath risen upon the

A preservation
against the
Plague.

the

the fire, and hath been scummed, you shall put therinto of *Aristolochia longa*, of *Angelica*, and of *Celandine*, of each half a handful, and boyl them well therein; then strain the drink through a cleane cloth, and dissolve therein a dram of the best *Meibridate*, as much *Ivory* finely powdered and sear'd, and six spoonfuls of *Dragon* water, then put it up in a close glasse; and every morning fasting take five spoonfuls thereof; and after bite and chaw in your mouth the dried root of *Angelica*, or smell on a *Nosegay*, made of the tassell end of a Ship-rope, and they will surely preserve you from infection.

For infection
of the plague.

But if you be infected with the p'ague, and feel the assured signs thereof, as pain in the head, drought, burning, weaknes of stomach, and such like. Then you shall take a dram of the best *Mithridate*, and dissolve it in three or four spoonfuls of *Dragon* water, and immediately drink it off, and then with hot cloaths or bricks made extream hot, and laid to the soles of your feet (after you have been wrapt in woollen cloths,) compell your self to sweat, which if you do, keep your self moderately therein, till the fore begin to rise; then to the same apply a live pidgeon cut in two parts, or else a plaister made of the yelt of an egg, honey, herb of grace chopt exceeding small, and wheat flower, which in very short space will not only ripen, but also break the same without any other incision; then alter it hath run a day or two, you shall apply a plaister of *Melilot* unto it, untill it be whole.

For the Pestilence.

Take *Featherfew*, *Malestot*, *Scabious*, and *Mugwort*, of each alike, bruise them and mix them with old Ale, and let the sick drink thereof six spoonfuls, and it will expell the corruption.

Another.

Take *Tarraw*, *Tansie*, *Feiberfew*, of each a handful, and bruise them well together, then let the sick party make water in the herbs, then strain them, and give it the sick to drink.

A preservation
against the pestilence.

Take of *Sage*, *Rue*, *Brier-leaves*, or *Elder-leaves*, of each a handful, stamp them and strain them with a quart of white wine, and put thereto a little *Ginger*, and a good spoonful of the *Treacle*, and drink thereof morning and evening.

Take *Smallage*, *Mallowes*, *Wormwood*, and *Rue*, and stamp them well together, and fry them in oyl Olive, till they be thick, plaister-wise apply it to the place where you would have it rise, and let it lie untill it break, then to heal it up, take the juice of *Smallage*, *Wheat-flower*, and *Milk*, and boyl them to a Pultis, and apply it morning and evening till it be whole.

How to draw
the Plague
down to any
place you will.

Take of *Burrage*, *Langdebeef*, and *Calamint*, of each a good handful, of *Harts-tongue*, *Red Mint*, *Violets*, and *Marygolds*, of each half a handful, boyl them in White-wine, or fair running water, then add a pennyworth of the best *Saffron*, and as much *Sugar*, and boyl them over again well, then strain it into an earthen pot, and drink thereof morning and evening, to the quantity of seven spoonfuls.

A Cordial for
any infection
at the heart.

Take *Linseed* and *Lettuce*, and bruise it well, then apply it to the stomach, and remove it once in four hours.

Against too
violent sweat-
ing.
For the head-
ach.

For the Head-ach, you shall take of *Rose-water*, of the juice of *Camomil*, of *womans milk*, of strong *wine-vinegar*, of each two spoonfuls, mix them together well upon a chafing-dish of coals; then take a piece of a dry *Rose-cake*, and steep it therein, and as soon as it hath drunk up the liquor, and is thoroughly hot, take a couple of sound *Nutmegs*, grated to powder, and strew them upon the *Rose-cake*, then breaking it into two parts, bind it on each side, upon the temples of the head, so let the party lye down to rest, and the pain will in a short space be taken from him.

For *Frenzy*, or inflammation of the cauls of the brain, you shall cause the juice of *Beets* to be with a Syringe squirted up into the patients nostrils, which will purge and cleanse his head exceedingly, and then give him to drink posset-ale, in which *Violet* leaves and *Lettuce* have been boyled, and it will suddenly bring him to a very temperate mindness, and make the passion of the *Frenzy* forsake him.

For the Fren-
zy.

For the *Lethargy*, or extream drowfiness, you shall by all violent means, either by noise or other disturbances, force perforce keep the party from sleeping; and whensoever he calleth for drink, you shall give him White-wine and *Hyssop-water*, of each a little quantity mixt together, and not suffer him to

For the Le-
thargy.

sleep above four hours in four and twenty, till he come to his former wakefulness, which as soon as he hath recovered, you shall then forthwith purge his head with the juice of *Beets* squirted up into his nostrils, as it is before shewed.

To provoke
sleep.

But if any of the family be troubled with too much watchfulness, so that they cannot by any means take rest, then to provoke the party to sleep, you shall take of *Saffron* a Dram, dried and beaten to powder, and as much *Lettuce-seed* also dried and beaten to powder, and twice as much *Poppie-seed* beaten also to powder, and mix these with womans milk, till it be a thick salve, and then bind it to the temples of the head, and it will soon cause the party to sleep, and let it lye on not above four hours.

For the swim-
ming of the
Head.

For the swimming or dizziness in the head, you shall take of *Agnus castus*, or *room-wort*, and of *Camomile* dried, of each two drams mixt with the juice of *Ivy*, oyl of *Roses*, and *White-wine*, of each a like quantity, till it come to a thick salve, and then bind it to the temples of the head, and it will in short space take away the grief.

For the Palfie.

For the Apoplexy or Palfie, the strong scent or smell of a Fox is exceeding soveraign, or to drink every morning half a pint of the decoction of *Lavender*, and to rub the head every morning and evening exceeding hard, with a very clean course cloth, where by the humours may be dissolved and dispersed into the outward parts of the body: by all means, for this infirmity, keep your feet safe from cold or wet, and also the nape of your neck; for from those parts it first getteth the strength of evil and unavoidable pains.

For a new
Cough.

For a cough or cold but lately taken, you shall take a Spoonful of *Sugar* finely beaten and sear'd, and drop into it of the best *Aqua vite*, untill all the *Sugar* be wet through, and can receive no more moisture: then being ready to lye down to rest, take and swallow the Spoonful of *Sugar* down, and so cover you warm in your bed, and it will soon break and dissolve the cold.

For an old
Cough.

But if the cough be more old and inveterate, and more inwardly fixt to the lungs, take of the powder of *Petony*, of the powder of *Carraway-seeds*, of the powder of *Sherwit* dried, of the powder of *Hounds-tongue*, and of *Pepper* finely

finely

beaten, of each two drams, and mingle them well with clarified hony; make an Electuary thereof, and drink it morning and evening for nine dayes together; then take of *Sugar candy* coarsly beaten, an ounce of *Lycoras* finely pared and trimmed, and cut into very little small slices, as much of *Anni-seeds* and *Coriander seeds*, half an ounce; mix all these together, and keep them in a paper in your pocket, and ever in the day time when the cough offendeth you, take as much of this dredg as you can hold between your thumb and fingers, and eat it, and it will give ease to your grief: and in the night when the cough taketh you, take of the juice of *Lycoras*, as much as two good Barly-corns, and let it melt in your mouth, and it will give you ease..

Although the falling-sicknes be seldom or never to be cured, For the falling sickness. yet if the party which is troubled with the same, will but morning and evening, during the wane of the Moon, or when she is in the sign *Virgo*, eat the berries of the herb *Asterson*, or bear the herbs about him next to his bare skin, it is likely he shall find much ease, and fall very seldom, though this medicine be somewhat doubtful.

For the Falling-evil, take, if it be a man, a Female mole; if a woman, a Male mole, and take them in March or else April, For the falling evil. when they go to the buck; then dry it in an Oven, and make powder of it whole as you take it out of the Earth, then give the sick person of the powder to drink evening and morning for nine or ten dayes together.

To take away deafnes, take a gray Eel with a white belly An oyl to help hearing. and put her into a sweet earthen pot quick, and stop the pot very close with an earthen cover, or some such hard substance: then dig a deep hole in a horse-dunghil, and set it therein, and cover it with the dung, and so let it remain for a fortnight, and then take it out, and clear out the oyl which will come of it, and drop it into the imperfect ear, or both, if both be imperfect.

To stay the flux of the Rheum, take Sage; and dry it before For the Rheum. the fire, and rub it to powder, then take Bay salt, and dry it, and beat it to powder, and take a Nutmeg and grate it, and mix them altogether, and put them in a long Linnen bag, then heat it upon a Tile-stone, and lay it to the nape of the necke.

For a stinking
breath.

For a stinking breath, take Oak-buds when they are new bud-
ded out, and distill them, then let the party grieved nine morn-
ings, and nine evenings drink of it; then forbear a while, and af-
ter take it again.

A Vomit for an
ill breath.

To make a Vomit for a strong stinking breath, you must
take of *Antimonium* the weight of three Barley-corns, and beat
it very small, and mix it with conserve of Roses, and give the
Patient to eat in the morning, then let him take nine dayes to-
gether the juice of Mints and Sage, then give him a gentle pur-
gation, and let him use the Juice of Mint and Sage longer.
This medicine must be given in the Spring of the year; but if the
infirmity come for want of digestion in stomach, then take *Mints*,
Marjoram, and *Wormwood*, and chop them small, and boyl them
in *Malmsey* till it be thick, and make a plaister of it, and lay it to
the stomach.

For the tooth-
ach.

For the *Toothach*, take a handful of *Daisy-roots*, and wash
them very clean, and dry them with a cloth, and then stamp them;
and when you have stamped them a good while, take the quan-
tity of half a nut-shell full of bay-salt, and strew it amongst the
roots, and when they are very well beaten, strain them through a
clean cloth; then grate some *Calamus Aromaticus*, and mix it
good and stiff with the juice of the roots, and when you have
done so, put it into a quill, and snuff it up into your nose, and
you shall find ease.

Another.

Another for the *Toothach*: take small *Sage*, *Rue*, *Smalage*, *Fen-
ibersew*, *Wormwood*, and *Mints*, of each of them half a handful, then
stamp them well altogether, putting thereto four drams of *Vine-
gar*, and one dram of *Bay-salt*, with a pennyworth of good *A-
qua-vite*; stir them all well together; then put it between two lin-
nen clouts, of the bigness of your cheek, temples, and jaw, and
quilt it in a manner of a course imbroydery; then set it upon a
Chafingdish of coals, and as hot as you may abide it, lay it over
the side where the pain is, and lay you down upon that side, and
as it cools warm it again, or else have another ready warm to
lay.

A drink for a
Pearl in the
eye.

To make a drink to destroy any pearl or film in the eye, take
a good handful of Marigold plants, and a handful of Fennel, as
much of May-weed, beat them together, then strain them with a
pink

point of beer, then put it into a pot, and stop it close, that the strength may not go out: then let the offended party drink thereof when he is in bed, and lye on that side on which the Pearl is, and likewise drink of it in the morning next his heart when he is risen.

For pain in the eyes, take Milk when it comes new from the Cow, and having filled it into a clean vessel, cover it with a pewter dish, and the next morning take off the dish, and you shall see a dew upon the same, with that dew wash the pained eyes, and it will ease them. For pain in the eyes.

For dim eyes, take Wormwood beaten with the gall of a Bull, and then strain it, and anoint the eyes therewith, and it will clear them exceedingly. For dim eyes.

For sore eyes, or blood-shot eyes, take the white of an Egg beaten to oyl, as much Rose-water, and as much of the juice of Housleek, mix them well together, then dip flats, Pleagants therein, and lay them upon the sore eyes, and as they dry, so renew them again, and wet them; and thus do, till the eyes be well. For sore eyes.

For watery eyes, take the juice of *Affodil*, *Mirrbe*, and *Saffron*, of each a little, and mix it with twice so much White-wine, then boyl it over the fire, then strain it and wash the eye therewith, and it is a present help. For watery eyes.

For a Canker, or any sore mouth, take Chervile, and beat it to a salve with old Ale and Allom-water, and anoint the sore therewith, and it will cure it. For a Canker.

For any swelling in the mouth, take the juice of Wormwood, Camomill, and Sherwit, and mix them with hony, and bath the swelling therewith, and it will cure it. A swelled mouth.

For the Quinsie or Squinancy, give the party to drink the herb *Monsieur* steep in ale or beer, and look where you see a Swine rub himself, and there upon the same place rub a Slick-stone, and then with it slick all the swelling, and it will cure it. For the Quinsie.

If you would not be drunk, take the powder of Betony and Goleworts mixt together; and eat it every morning fasting, as much as will lye upon a six-pence, and it will preserve a man from drunkenness. Against Drunkenness.

To quicken
the Wit.

To quicken a mans wits, spirit and memory, let him take Lang-debeef, which is gathered in *June* or *July*, and beating it in a cleane no tar, let him drink the juice thereof with warme water, and he shall finde the benefit.

For the Kings
Evil.

If a man be troubled with the *Kings-evil*, let him take the red Dock, and seeth it in Wine till it be very tender, then strain it and so drink a good draught thereof, and he shall finde great ease from the same, especially if he do continue the use thereof.

Additions to
the particular
sicknesses; and
first of the
Head, and the
parts thereof,
and the lungs.

Take Frankincense, Doves-dung and Wheat-flower, of each an ounce, and mix them well with the white of an Egge, then plaisterwise apply it where the pain is.

The oyl of Lillies, if the head be anointed therewith, is good for any pain therein.

Take Rew, and steep it in Vinegar a day and a night, the Rew being well bruised; then with the same anoint the head twice or thrice a day.

Another for
the headach,
and to stay
bleeding at the
Nose.

Take the White of an Egge and beat it to oyl, then put it to Rose-water, and the powder of Alabaſter, then take flax and dip it therein, and lay it to the temples, and renew it two or three times a day.

To draw out
bones broken
in the head.
For the fall-
ling of the
Mould of the
head.

Take Agrimony and bruise it, and plaisterwise apply it unto the wound, and let the party drink the juice of Betony, and it will expel the bones, and heal the wound.

Take the leaves of Agrimony, and boyl them in hony, till it be thick like a plaister, and ther apply it to the wound of the head warm.

The Squinan-
cy.

Take a Table-napkin, or any Linnen cloth, and wet it in cold water, and when you go to bed apply it to the swelling, and lye upright; thus do three or four times in a night, till the swelling waite.

The Tooth-
ach.

Take two or three Dock-roots, and as many Daisie-roots, and boyl them in water till they be soft, then take them out of the water, and boyl them well over again in oyl Olive, then strain them through a cleane cloth, and anoint the pained tooth therewith, and keep your mouth close, and it will not onely take away the pain, but also ease any Megrim or grief in the head.

To make teeth
white.

Take a Sawcer of strong Vinegar, and two spoonfulls of the powder

powder of *Rochallome*, a spoonful of white Salt, and a spoonful of hony: seeth all these till it be as thin as water, then put it into a close vial and keep it, and when occasion serves wash your teeth therewith with a rough cloth, and rub them soundly, but not to bleed.

Take some of the green of the Elder-tree, or the apples of Oak, and with either of these rub thy teeth and gums, and it will loosen them so, as you may take them out. To draw teeth without Iron.

Take Sage and salt, of each alike, and stamp them well together, then take it till it be hard, and make a fine powder thereof, then therewith rub the teeth evenings and mornings, and it will take away all yellowness. Teeth that are yellow.

First let them bleed, then take *Harts-horn* or *Ivery*, and red *Impernel*, and bruise them well together; then put it into a linnen cloth, and lay it to the teeth, and it will fasten them. For teeth that are loose.

Take the juice of *Lovage*, and drop it into the ear, and it will cure any venom, and kill any worm, ear-wig, or other Vermin. For any venom in the ear.

Take two ounces of *Cummin*, and beat it in a Mortar to fine powder, then boyl it in White-wine from a pottle to a quart, then drink thereof morning and evening as hot as you can suffer: anotherwise take an ounce of wild *Tyme*, and bring clean washed, cut it small, and then powder it; then put to it half an ounce of *Pepper* in fine powder, and as much *Cummin*, mix them all well together, and boyl them in a pottle of White-wine, till half be consumed, and after meal (but not before) use to drink thereof hot, also once in the afternoon, and at your going to bed; and it will purge the breath. For a stinking breath which cometh from the Stomach.

Take red Nettles and burn them to powder; then adde as much of the powder of *Pepper*, and mix them very well together, and stuff thereof up into the nose; and thus do divers times a day. For stinking nostrils.

Take old Ale, and having boyled it on the fire, and cleansed it, adde thereunto a pretty quantity of life honey, and a much *Al-lome*, and then with a Syringe, or such like, wash the sores therewith very warm. For a Canker in the nose.

Take a Gallon of running water, and boyl it to a pottle; then put A red water for any Canker.

put to it a handful of red Sage, a handful of Celandine, a handful of Hony-suckles, a handful of Woodbine leaves and flowers; then take a penny worth of Grains made into fine powder, and boyl all very well together: then put to it a quart of the best life-honey of a year old, and a pound of Roch-Allom, let all boyl together till it come to a pottle, then strain it and put it into a close vessel, and therewith dress and anoint the Sores as occasion serves: it will ease any Canker or Ulcer, and cleanse any wound. It is best to be made at *Midsummer*.

To clear the
Eyes.

Take the flowers and roots of *Primroses* clean washt in running water, then boyl them in fair running water for the space of an hour, then put thereto a pretty quantity of white *Copperas*, and then strain all through a linnen cloth, and so let it stand a while, and there will an oyl appear upon the water, with that oyl anoint the lids and the brows of your eyes, and the temples of your head, and with the water wash your eyes, and it is most soveraign.

Another for
the Sight.

Take fifteen seeds of *Juniper*, and as many *Grommel* seeds, five branches of *Fennel*, beat them altogether, then boyl them in a pint of old Ale, till three parts be wasted; then strain it into a Glas, and drop thereof three drops into each eye at night, and wash your eyes every morning for the space of fifteen days with your own water, and it will clear any decayed sight whatsoever.

For sore Eyes.

Take red Snails, and seeth them in fair water, and then gather the oyl that ariseth thereof, and therewith anoint your eyes morning and evening.

For weak eyes.

Take a Gallon or two of the dregs of strong Ale, and put thereto a handful or two of *Cummin*, and as much salt, and then distill it in a Limbeck, and the water is most precious to wash Eyes with.

For bleared
Eyes.

Take Celandine, Rue, Chervile, Plantane, Annise, of each alike, and as much Fennel as of all the rest, stamp them all well together, then let it stand two days and two nights, then strain it very well, and anoint your eyes morning and evening therewith.

For the Pin
and Web in
the Eye.

Take an Egge, and roast it extream hard, then take the white being very hot, and lap in it as much white *Copperas* as a
Pease.

pease, and then violently strain it through a fine cloth, then put a good drop thereof into the eye, and it is most sovereign.

Take two drams of prepared Tussia, of Sandragon one dram, of Sugar a dram, bray them all well together till they be exceeding small, then take of the powder, and blow a little thereof into the eye, and it is sovereign. A powder for the pin and web in the eyes.

Take of red Rose leaves, of Smallage, of Maidenhair, Eufase, Endive, Succory, red Fennel, Hil-wort, and Celandine, of each half a quarter of a pound, wash them clean, and lay them in steep eyes. A precious water for the
in white wine a whole day: then distill them in an ordinary Salt, and the first water will be like gold, the second like silver, and the third like balsm; any of these is most precious for the eyes, and hath recovered sight lost for the space of ten years, having been used but four dayes.

Take the leaves of Willow, and boyl them well in oyl, and therewith anoint the place where you would have hair to grow, whether upon head or beard. To make hair grow.

Take Treacle water, and honey, boyl them together, and wet a cloth therein, and lay it where you would have hair to grow, and it will come speedily. Another.

Take nine or ten eggs, and rost them very hard, then put away the yelks; and bray the Whites very small, with three or four ounces of white Copperas, till it be come to perfect oyntment, then with it anoint the face morning and evening, for the space of a week and more. For a pimpled or red sawcy face.

Take the rind of Hyssop, and boyl or burn it, and let the fume or smoak go into the mouth, and it will stay any rheum falling from the head. For the rheum.

Take a pint of running water, and three spoonfuls of hony, and boyl them together: and scum off the filth, then put thereto one ounce of small Raisins, and strain it well through a cloth, and so drink it morning and evening. For hoarsness in the throat.

Take *Aqua vite* and Salt, and mix it with strong old Ale, and then heat it on the fire, and therewith wash the soles of the feet when you go to bed. For a dangerous cough.

Take of clean Wheat, and of clean barley, of each a like quantity, and put them into a gallon and a half of fair water, and boil them For a dry cough.

them till they burst, then strain it into a clean vessel, and adde thereto a quartern of fine *Lycoras* powder, and two penyworth of *gumme Arabick*, then boyl it over again, and strain it, and keep it in a sweet vessel, and drink thereof morning and evening.

For the Pitsick. Take the best Wort, and let it stand till it be yellow, then boyl it, and after let it cool, then put to it a little quantity of *Berm*, and *Saffron*, and so drink of it every morning and evening while it lasteth: otherwise, take *Horebounnd*, *Violet-leaves*, and *Hyssop*, of each a good handful, seeth them in water, and put thereto a little *Sugar*, *Lycoras*, and *Sugar-Candy*; after they have boyled a good while, then strain it into an earthen vessel, and let the sick drink thereof six spoonfuls at a time morning and evening: or lastly, take the lungs of a Fox, and lay it in Rose-water, or boyl it in Rose-water, then take it out, and dry it in some hot place without the Sun; then beat it to powder with *Sugar Candy*, and eat of this powder morning and evening.

For grief in the stomach. To ease the pain in the stomach, take *Endive*, *Mints*, of each a like quantity, and steep them in White-wine a days space; then straining and adding thereunto a little *Cinnamon* and *Pepper*, give it to the sick person to drink, and if you adde thereto a little of the powder of *Horse-mint*, and *Calamint*, it will comfort the Stomach exceedingly, and occasion swift and good digestion.

For spitting of blood. For spitting of blood, whether it proceed of inward bruises, overstraining, or such like; you shall take some *pitch*, and a little *Sperma Ceti*, and mix it with old Ale, and drink it, and it will stay the flux of blood: but if by means of the bruise any outward grief remain, then you shall take the herb *Brockthemp*, and frying it with sheeps tallow, lay it hot on the grieved place, and it will tak away the anguish.

For vomiting. To stay the flux of vomiting, take *Wormwood*, and sower bread toasted, of each a like quantity, and beat them well in a mortar, then add to them as much of the juice of *Mints*, and the juice of *Plantane*, as will bring it to a thick salve: then fry them altogether in a frying-pan, and when it is hot, lay it plaisterwise to the mouth of the stomach; then let the party drink a little white-wine and *Chervile*-water mixt together, and then steep sower toasted bread in very strong vinegar, wrap it in a fine cloth, and let

let the sick party smell thereto, and it will stay the excess of vomiting, and both comfort and strengthen the Stomach.

If you would compell one to vomit, take half a spoonful of Stone-crop, and mix it with three spoonfuls of White-wine, and give it to the party to drink, and it will make him vomit presently; but do this seldome, and to strong bodies, for otherwise it is dangerous.

To force one to vomit.

For the *Iliaca passio*, take of Polypody an ounce, and stamp it; then boyl it with Prunes and Violets in Fennel water, or Anniseed water; take thereof a good quantity; then strain it, and let the party every morning & evening drink a good draught thereof.

For the *Iliaca Passio*.

If the Stomach be troubled with wind or other pain, take Cummin, and beat it to powder, and mix it with Red Wine, and drink it at night when you go to bed divers nights together.

Additions to the diseases of the Stomach.

Take Brooklime-root and leaves, and wash them clean, and dry them in the Sun, so dry, that you may make powder thereof, then take of the powder a good quantity, and the like of Treacle, and put them in a cup, with a pretty quantity of strong old Ale, and stir them well together, and drink thereof first and last, morning and evening, for the space of three or four dayes; and if need do require, use the same in the broths you do eat, for it is very soveraign.

For the stomach.

For the *Iliaca Passio*.

Take Harts-horn, or Ivory beaten to fine powder, and as much Cinnamon in powder, mix them with Vinegar, and drink thereof to the quantity of seven or eight spoonfuls.

For pain in the breast.

Take the water of Mousseare, and take thereof the quantity of an ounce and a half, or two ounces, twice or thrice a day: or otherwise take a little Nutmeg, a little Cloves, a little Mace, and a very little Ginger, and the flowers of Lavender; beat all unto a fine powder, and when the passion of the Mother cometh, take a Chafingdish of good hot Coals, and bend the patient forward, and cast of the powder into the Chafingdish, so as she may receive the smoak both in at her nose and mouth, and it is a present cure.

The mother

Against obstructions in the Liver, take Anniseeds, Amcos, Bur-net, Camomile, and the greater Centaury, and boyl them in white

Obstruction of the Liver.

Against the
heat of the
Liver.

wine with a little honey, and drink it every morning, and it will cure the obstructions and cleanse the Liver from all imperfection.

Against the heat and inflammation of the Liver, take Endive dried to powder, and the meal of *Lupine* seeds, and mix it with Hony, and the juice of Wormwood, make a cake thereof, and eat it, and it will assuage the great heat and inflammation of the Liver, and take away the pimples and redness of the face, which proceedeth from the same.

For the Pleur-
isic.

To prevent a Pleurisie a good while before it come, there is no better way than to use much the exercise of ringing, or to stretch your arms upward, so as they may bear the weight of your body, and so swing your body up and down a good space; but having caught a Pleurisie, and feeling the gripes, stitches, and pangs thereof, you shall presently cause the party to be let blood, and then take the herb *Althea*, or Holyhock, and boyl it with Vinegar and Linseed, till it be thick plaister-wise, and then spread it upon a piece of Allom-leather, and lay it to the side that is grieved, and it will help it.

A Plaister for a
Stitch

To help a stitch in the side, or elsewhere, take Doves-dung, red Rose-leaves, and put them into a bag, and quilt it: then thoroughly heat it upon a chafingdish of coals, with vinegar in a platter: then lay it upon the pained place, as hot as may be suffered, and when it cooleth heat it again.

Heat in the
Liver.

For any extraordinary heat or inflammation in the Liver, take Barberies, and boyl them in clarified Whey, and drink them, and they will cure it.

For the con-
sumption.

If you will make a Cordial for a Consumption, or any other weakness, take a quart of running water, a piece of Mutton, and a piece of Veal, and put them with the water into a pot; then take of Sorrel, Violet-leaves, Spinage, Endive, Succory, Sage, Hyssop, of each a good quantity; then take Prunes and Raisins, and put them all to the broth, and seeth them from a quart to a pint; then strain the yolk of an Egg, and a little Saffron thereinto, putting in Sugar, whole Mace, and a little White-wine; so seeth them a while together, and let the party drink it as warm as may be.

To stanch
blood.

To stanch blood, take the herb Shepherds-purse, (if it may be gotten) distilled at the Apothecaries, and drink an ounce thereof at a time, morning and evening, and it will stay any flux of

of blood natural or unnatural; but if you cannot get distilled water, then boyl a handful of the herb with Cinnamon, and a little Sugar, in Claret wine, and boyl it from a quart to a pint, and drink it as oft as you please: also, if you do but rub the herb between your hands, you shall see it will soon make the blood return.

For the yellow Jaundice, take two penniworth of the best English Saffron, dry it and grind it to exceeding fine powder; then mix it with the pap of a roasted Apple, and give it the diseased party to swallow down in the nature of a Pill, and thus do divers mornings together, and without doubt it is the most present cure that can be for the same, as hath been oftentimes proved.

For the yellow jaundice.

For the yellow Jaundise, take Pimpernel and Chickweed, stamp them and strain them into Posset-Ale; and let the party drink thereof morning and evening.

For the yellow Jaundice, which is desperate, and almost past cure; take sheeps-dung new made; and put it into a cup of beer or ale, and close the cup fast, and let it stand so all night, and in the morning take a draught of the clearest of the drink, and give it unto the sick party.

For the Black Jaundice, take the herb called Penny-royal, and either boyl it in White-wine, or drink the juice thereof simply by it self, to the quantity of three or four spoonfuls at a time, and it will cure the black Jaundice.

For the black jaundice.

Take of Hyssop, Parsley, and Harts-tongue, of each a like quantity, and seeth them in Wort till they be soft, then let it stand till it be cold, and then drink thereof first and last, morning and evening.

Additions for the diseases of the Liver.

Take Fennel-roots, and Parsly-roots of each alike, wash them clean, and pill off the upper Bark, and cast away the pith within; then mince them small; then put them to three Pints of water, and set them over the fire; then take figs and shred them small, take Lycoras, and break it small, and put them to the herbs, and let all boyl very well, then take Sorrel, and stamp it, and put it to the rest, and let it boyl till some part be wasted, then take a good quantity of hony, and put to it, and let it boyl a while, then take it from the fire, and clarify it through a Strainer into a glass vessel, and stop it very close; then give the sick to drink thereof

For wasting of the Liver.

To heal a
Ring-worm
coming of the
heat of the
Liver.
To stanch
blood.

thereof morning and evening.

Take the stalk of Saint *Mary Garlick*, and burn it, or lay it upon a hot Tile-stone untill it be very dry, and then beat it into powder, and rub the sore therewith, untill it be whole.

Take Wool in the Walk-mill that cometh from the cloth, and flyeth about like Doun, and beat it into powder; then take thereof, and mix it with the White of an Egge and Wheat-flower, and stamp them together: then lay it on a linnen cloth or Lint, and apply it to the bleeding place, and it will stanch it.

For great danger in bleeding.

If a man bleed, and have no present help, if the wound be on the foot, bind him about the ankle: if in the legs, bind him about the knee; if it be on the hand, bind him about the Wrist; if it be on the arm, bind him about the brawn of the arm, with a good list, and the blood will presently stanch.

For a Stich.

Take good store of Cinnamon grated, and put it into posset-ale very hot and drink it, and it's a present cure.

A bath for the Leprosie.

Take a gallon of running water, and put to it as much salt as will make the water as salt as the Sea-water, then boyl it a good while, and bath the legs therein as hot as may be suffered.

For the Dropsie.

For the Dropsie, take *Agnus castus*, *Fennel*, *Affodil*, dark *Walwort*, *Lupins*, and *Wormwood*, of each a handful, and boyl them in a gallon of White-wine untill a fourth part be consumed: then strain it, and drink it morning and evening half a pint thereof, and it will cure the Dropsie; but you must be careful that you take not *Daffodil* for *Affodil*.

Pain in the Spleen.

For pain in the Spleen, take *Agnus castus*, *Agrimony*, *Aniseeds*, *Centaurie* the great, and *Wormwood*, of each a handful, and boyl them in a gallon of White-wine, then strain it, and let the Patient drink divers mornings together half a pint thereof; and at his usual meals let him neither drink Ale, Beer, nor Wine, but such as hath had the herb *Tamarisk* steeped in the same, or for want of the herb let him drink out of the cup made of *Tamarisk* wood, and he shall find remedy.

Pain in the Liver.

For any pain in the side, take *Mugwort* and red *Sage*, and lay them between two Tile-stones, and then put it into a bag, and lay to your side as hot as can be indur'd.

For fatness and short breath.

To help him that is exceeding fat, pursie, and short-breathed: take hony clarified, and bread unleavened, and make Tolls of it,

and dip the toast in the clarified honey, and eat this divers mornings with your meat.

Take a lump of Iron or Steel, and heat it red hot, and quench it in Wine, and then give the Wine to the sick party to drink.

Take *Fennel-seeds*, and the roots, boyl them in water, and after it is cleansed put to it honey, and give the party to drink; then seeth the herb in Oyl and Wine together, and plaisterwise apply it to the side.

Make a plaister of *Wormwood* boyled in oyl, or make an ointment of the juice of *Wormwood*, of *Vinegar*, *Armoniack*, *Wax*, and *Oyl*, mixed and melted together, and anoint the sides therewith, either in the Sun, or before the fire.

Take the powder of *Galingal*, and mix it with the juice of *Burrage*, and let the offended party drink it with sweet Wine.

Take *Rosemary* and *Sage* of each a handful, & seeth them in white wine or strong ale, and then let the patient drink it luke-warm.

Take the juice of *Fennel* mixt with honey, and seeth them together till it be hard, and then eat it evening and morning, and it will consume the fatness.

For the *Wind-collick*, which is a disease both general, and cruel, there be a world of Remedies, yet none more approved than this which I will repeat: you shall take a *Nutmeg* sound and large, and divide it equally into four quarters; the first morning as soon as you shall rise, eat a quarter thereof; the second morning two quarters, and the third eat three quarters, and the fourth morning eat a whole *Nutmeg*, and so having made your stomach and fast familiar therewith, eat every morning whilst the *Collick* offendeth you, a whole *Nutmeg* dry without any composition, and fast ever an hour at least after it, and you shall find a most unspeakable profit which will arise from the same.

For the *Wind-collick*; take a good handful of clean *Wheat-meal*, as it cometh from the Mill, and two Eggs, and a little *Wine-vinegar*, and a little *Aqua-vite*; and mingle them together cold, and make a cake of it, and bake it on a gridiron with a soft fire, and turn it often, and tend it with basting of *Aqua vite* with a feather, then lay it somewhat higher than the pain is, rather than lower.

For the *Lask* or extreme scouring of the belly, take the seeds

Additions.

To the diseases of the Spleen.

For stopping of the Spleen.

Diseases of the Heart.

For passion of the heart.

For heart sickness.

For fatness about the heart.

For the wind Collick.

The wind Collick.

of.

of the Wood-rose, or Bryer-rose, beat it to powder, and mix a dram thereof with an ounce of the conserve of Sloes, and eat it, and it will in a short space bind and make the belly hard.

For the bloody flux.

For the bloody-flux, take a quart of red wine, and boyl therein a handful of Shepherds-purse, till the herb be very soft: then strain it, and add thereto a quarter of an ounce of Cinnamon, and as much of dried Tanners bark taken from the Ouze, and both beaten to fine powder; then give the party half a pint thereof to drink morning and Evening, it being made very warm, and it will cure him.

To stay a lask.

To stay a fore Lask, take Plantane water, and Cinnamon finely beaten, and the flowers of Pomgranates, and boyl them well together; then take Sugar, and the yelk of an Egg, and make a Caudle of it, and give the grieved party it.

For the flux.

For the Flux take Stags pizzel dried and grated, and give it in a drink, either in Beer, Ale, or Wine, and it is most soveraign for any Flux whatsoever. So is the jaw-bones of a Pike, the teeth and all dried and beaten to powder, and so give the party diseased in any Drink whatsoever.

For the worst flux.

To cure the worst bloody flux that may be, take a quart of red wine, and a spoonful of Cummin seed, boyl them together untill half be consumed, then take Knot-grass, and Shepherds-purse, and Plantane, and stamp them severall, and then strain them, and take of the juice of each of them a good spoonful, and put them to the wine, and so seeth them again a little: then drink it luke-warm, half over night, and half the next morning; and if it fall out to be in winter, so that you cannot get the herbs, then take the water of the herbs distilled, of each three spoonfuls, and use it as before.

For colliciveness.

For extream colliciveness, or binding in the body, so as a man cannot void his excrements; take Anniseeds, Fenugreek, Linseeds, and the powder of Piony, of each half an ounce, and boyl them in a quart of White-wine, and drink a good draught thereof, and it will make a man go to the Stool orderly, and at great ease.

For worms.

For worms in the belly, either of Child or man, take Aloes Cicotrine, as much as a half hazel Nut, and wrap it in the pap of a roasted Apple, and so let the offended party swallow it in the manner

manner of a pill fasting in the morning, or else mix it with three or four spoonfulls of Muscadine, and so let the party drink it, and it is a present cure. But if the child be either so young, or the man so weak with sickness, that you dare not administer any thing inwardly, then you shall dissolve your Aloes in the oyle of Savine, making it thick like salve, then plaisterwise spread it upon Sheeps leather, and lay it upon the navil and mouth of the Stomach of the grieved party, and it will give him ease; so will also unset Leeks chopt small and fryed with sweet butter, and then in a linnen bag, applyed hot to the navil of the grieved party.

Take a quart of red wine, and put to it three yelks of eggs, and a pennyworth of long Pepper and grains, and boyl it well, and drink it as hot as can be suffered: or otherwise, take an ounce of the inward bark of an oak, and a pennyworth of long Pepper, and boyl them in a pint, and better of New Milk, and drink it hot first and last morning and evening.

Take an egge, and make a little hole in the top, and put out the white, then fill it up again with Aquavita, stirring the edge and Aquavita, till it be hard, then let the party eat the egg and it will cure him: or otherwise take a pint of red wine and nine yelks of eggs, and twenty Pepper corns small beaten, let them seeth untill they be thick, then take it off, and give the diseased party to eat nine spoonfulls morning and evening.

Take of Rue and Beets alike quantity, broise them, and take the juyce, mix it with clarified hony, and boyl it in red wine, and drink it warm first and last morning and evening.

Take Mercury, Cinkefoyl, and Mallows, and when you make Pottage or broth with other herbs, let these herbs before named have most strength in the pottage, and eating thereof it will give you two stools and no more.

Take two spoonfulls of the juyce of Ivy leaves, and drink it three times a day, and it will dissolve the hardness of the belly of the bark of the roots of the elder tree, and stamp it, and mix it with old Ale, and drink thereof a good hearty draught.

Take the crums of white bread, and steep it in Milk with Allom and Sugar unto it and eat it, and it will open the belly.

Take

E e e

Take

Additions to the diseases of the belly and gurs. For the greatest Lax.

For the bloody flux.

For an easie Lask.

To have two stools a day and no more.

for hardness of the belly or womb. Against constiveness.

For the wind collick.

For the stop-
ping of the
womb.

Take the Kernels of three Peach stones, and bruise them, seven corns of case pepper, and sliced ginger a greater quantity then of the pepper, pound all together grossly, and put it into a spoonfull of Sack (which is best) or else white Wine, or strong Ale, and drink it off in a great spoon, then fast two hours after, and walk up and down if you can; if otherwise, keep your self warm and beware.

For the Rup-
ture.

Take of *Daisies*, *Cumfrey*, *Polipody* of the Oak, and *Avens*, of each half a handfull, two roots of *Osmund*, boyl them in strong Ale and Honey, and drink thereof Morning, Noone, and night, and it will heal any reasonable Rupture. Or otherwise take of *Smallage*, *Comfrey*, *Setwell*, *Polypody*, that grows on the ground like *searn*, *daisies*, and *mores*, of each a like, stamp them very small, and boyl them well in Barm, untill it be thick like a poultis, and so keep it in a close vessel, and when you have occasion to use it, make it as hot as the party can suffer it, and lay it to the place grieved, then with a trusse, truss him up close, and let him be very carefull for straining himself, and in a few days it will knit: during which cure, give him to drink a draught of red wine, and put therein a good quantity of the flowre of fetches, finely boulded, stirring it well together, and then fast an hour after.

For the Stone.

For the violent pain of the Stone, make a posset of milk and sack, then take off the curd, and put a handfull of *Camemil* flowers into the drink, then put it into a pewter pot, and let it stand upon hot embers, so that it may dissolve; and then drink it as occasion shall serve. Otherwise for this grief, take the stone

Another.

of an Oxe gall, and dry it in an Oven, then beat it to powder, and take of the quantity of a hazel nut, with a draught of good Ale, or white wine.

The Collick
and Stone.

For the Collick and stone, take Hawthorn berries, the berries of sweet Bryers, and ashen Keyes, and dry them every one severally until you make them into powder, then put a little quantity of every one of them together, then if you think good, put to it the powder of *Licoris* and *Annisfeeds*, to the intent the party

Another.

may the better take it, then put in a quantity of this powder in a draught of white wine, and drink it fasting. Otherwise you may take *Smallage*-seed, *Parsley*, *Lovage*, *Saxifrage*, and *broom*-seed, of each.

each of them a little quantity, beat them into a powder, and when you feel a fit of either of the diseases, eat of this powder a spoonful at a time either in pottage, or else in the broth of a chicken, and so fast two or three hours after.

To make a powder for the collick and stone, take *fennel*, *par-
sly-seed*, *anisi-seed*, and *caramay-seed*, of each the weight of six pence, of *grummel-seed*, *saxifrage seed* the roots of *Ilapendata* and *Licoris*, of each the weight of twelve pence, of *galingal*, *spikenard*, and *Cinnamon*, of each the weight of eight pence, of *Senna* the weight of seventeen shillings good weight, beat them all to powder and searse it, which will weigh in all twenty five shillings and six pence. This powder is to be given in white wine and sugar in the morning fasting, and so to continue fasting two hours after; and to take of it at one time the weight of ten pence, or twelve pence.

A powder for
the Collick
and Stone.

Other Physitians for the stone, take a quart of Rhenish or white wine, and two lemons, and pare the upper rind thin, and slice them into the wine, and as much white soape as the weight of a groat, and boyl them to a pint, and put thereto sugar according to your discretion and so drink it, keeping your self warm in your bed, and lying upon your back.

Another.

For the stone in the reins, take *Ameos*, *Cammomil*, *Maiden hair*, *Sparrow-tongue* and *Philipendula*, each a like quantity, dry it in an oven, and then beat it to powder, and every morning drink half a spoonful thereof with a good draught of white wine, and it will help.

For the stone
in the reins.

For the stone in the bladder, take a raddish root and slit it cross twice, then put it into a pint of white wine and stop the vessel exceeding close: then let it stand all one night, and the next morning drink it off fasting, and thus do divers mornings together, and it will help.

For the stone
in the bladder.

For the stone in the bladder, take the kernels of sloes, and dry them on a tile stone, then beat them into powder, then take the roots of *Alexander*, *Parlsy*, *Pellitory*, and *Holihack*, of every of their roots a like quantity, and seeth them all in white wine, or else in the broth of a young chicken: then strain them into a clean vessel, and when you drink of it, put into it half a spoonfull of the powder of sloe Kernels: Also if you take the oyle of

A powder for
the stone in
the bladder.

Scorpion, it is very good to anoint the members, and the tender parts of the belly against the bladder.

A bathe for
the stone.

To make a bath for the stone, take mallows, holihoock, and lilly roots, and linseed, Pellitory of the wall, and seeth them in the broth of a Sheeps head and bathe the Reins of the back therewith oftentimes, for it will open the straightness of the water conduits, that the stone may have issue and assuage the pain, and bring out the gravell with the Urine: but yet in more effect, when a playster is made and laid upon the reins and belly immediately after the bathing.

A water for
the stone.

To make a water for the stone, take a gallon of new milk of a Red Cow, and put therein a handfull of Pellitory of the wall and a handfull of wild Thyme, and a handfull of Saxifrage, and a handfull of Parsly, and two or three Radish roots sliced, and a quantity of Philipendula roots; let them lye in the milk a night, and in the morning put the milk with the herbs into a Still, and distill them with a moderate fire of Charcole or such like: then when you are to use the water, take a draught of Rhenish wine or white Wine, and put into it five spoonfulls of the distilled water, and a little Sugar and Nutmeg sliced, and then drink of it, the next day meddle not with it, but the third day doe as you did the first day, and so every other day for a weeks space.

Difficulty of
Urine.

For the difficulty of Urine, or hardness to make water, take Smallage, Dill, Anniseeds, and Burnet, of each a like quantity, and dry them and beat them to fine powder, and drink half a spoonfull thereof, with a good draught of White wine.

Hot hot Urine.

If the Urine be hot and burning, the party shall rise every morning to goe to drink a good draught of new Milke and Sugar mixt together, and by all means to abstain from Brer that is old, hard and tart, and from all meats and sawces which are sour and sharp.

For the Strangulion.

For the Strangulion, take Saxifrage, Polypody of the Oaks, the root of beans, and a quantity of Railins, of every one three handfull or more, and then two gallons of good Wine, or else Wine lees, and put it into a Serpentry, and make thereof a good quantity, and give the sick to Drink Morning and Evening a spoonfull at once.

For them that cannot hold their water in the night time, For pissing in
take Kids hoof, and dry it, and beat it into powder, and give bed.
it to the patient to drink, either in beer, or ale four or five times
over.

For the rupture or bulshennesse in men take Comfrey and Bar. For the Rup-
ture.
re-
ment, and beat them together and yellow wax, and
Dears feet, untill it come unto a salve, and then apply it unto
the broken place, and it will knit it, also it shall be good for
the party to take Comphry roots, and rost them in hot embers, as
you rost wardenes, and let the party eat them: for they are very
sovereign for the rupture: especially being eaten in a morning
fasting: and by all means let him wear a strong trusse till it be
whole.

Take Goatsclaws and burn them in a new earthen pot to Additions to
powder, then put of the powder into broth or pottage and eat it the diseases of
therein: or otherwise take Rue, Parsley, and Gromwell, and the reins and
stamp them together, and mix it with wine and drink it. bladder.

Take Agnus castus, and Castoreum, and seeth them together in For him that
wine, and drinke thereof also seeth them in vinegar, and lap it thoe cannot hold
about the privy parts, and it will help. his water.

Take Malmsiey and butter, and warm it, and wa^{sh} the reins of For the Go
the back, whereupon you find pain, then take oyl of Mace, and norrhea, or
anoit therewith. shedding of
seed.

First wash the reins of the back with warm white wine, then For weaknes
anoit all the back with the ointment called Perfluane in the back.

Take a leg of beef, a handfull of Fennel roots, a handfull of Par- For heat in
sley roots, two roots of Comfrey one pound of Raisins of the Sun, the reins.
a pound of damask Prunes, and a quarter of a pound of Dates, For comfor-
put all these together, & boyl them very soft, with six leaves of ting and
Nep, six leaves of Clary, twelve leaves of Britany of the wood, strengthning
and a hile Harts tongue: when they are sod very soft, take them of the back.
into the same broth again, with a quart of sack, and a penniworth
of large mace, and of the sack sink at your pleasure.

For the Hemorrhoides, which is a troublesome and sore grief, For the he-
make of Dill, Dog-fennel, and Pellitory of Spain, of each half moids.
a handfull, and beat it in a mortar with Sheeps suet and black
Sape, till it come to a salve, and then plaister-wise, apply it to
the

the fore, and it will give the grief ease.
 For the piles or hemorrhoids. For the Piles or Hemorrhoids, take half a pint of Ale, and a good quantity of Pepper, and as much Allom as a Walnut, boyl all this together till it be as thick as birdlime, or thicker, this done, take the juyce of white Violets, and the juyce of Housleek, and when it is almost cold, put in the juyce, and strain them altogether, and with this ointment anoint the sore place twice a day. Otherwise for this grief, take Lead and grate it small, and lay it upon the fore: or else take muscles dried and beat to powder, and lay it on the sores.

For the falling of the fundament. If a mans fundament fall down through some cold taken, or other cause, let it be forthwith put up again: then take the powder of *Town cross* dried, and strew it gently upon the fundament, and anoint the reins of the back with hony, and then about it strew the powder of Cummin and Calasine mixt together, and ease will come thereby.

Additions to the diseases of the privy parts. Take a great handfull of Orpins, and bruise them between your hands, till it be like a salve, and then lay them upon a cloth, and bind them fast to the Fundament.

For the hemorrhoids. To help the green sickness, take a pottle of white wine, and a handfull of Rosemary, a handfull of Wormwood, an ounce of Cardus Benedictus seed, and a draine of Cloves: all these must be put into the white wine in a jug, and covered very close, and let it steep a day and a night before the party drink of it, then let her drink of it every morning, and two hours before supper: and so take it for a fortnight, and let her stir as much as she can, the more the better, and as early as she can. Otherwise for this sickness take Hyssop, Fennel, Penroyal, of these three, one good handfull, take two ounces of Currants, seeth these in a pint of fair water, to a half, then strain the herbs from the liquor, and put thereto two ounces of fine sugar, and two spoonfulls of white wine vinegar, let the party drink every morning four spoonfulls thereof, and walk upon it.

To increase a womans milk. To increase a womans milk, you shall boyl in strong posset ale, good store of Coleworts, and cause her to drink every meal of the same: also, if she use to eat boiled Coleworts with her meat, it will wonderfully increase her milk.

To dry up a womans milk, take red sage, and having stamp

it, and strained the juyce from the same, add therunto as much wine vinegar, and stir them well together, then warm it on a flat dish, over a few coals, steep therein a sheet of brown paper, then making a hole in the midst thereof for the nipple of the brest to go through, cover all the breast over with the paper, and remove it as occasion shall serve, but be very careful it be laid very hot to. Some are of opinion, that for a woman to milk her breasts upon the earth, will cause her to dry; but I refer it to triall.

To dry up
Milk.

To help womens sore breasts, when they are swelled, or else inflamed, take Violet leaves, and cut them small, and wash them in milk or running water with wheat bran, or wheat bread crumbs, then lay it to the sore, as hot as the party can endure it.

A puleis for
sore breasts
in women.

If a woman have a strong and hard labour, take four spoonfulls of another womans milk, and give it the woman to drink in her labour, and she shall be delivered presently.

For ease in
child-bearing.

If a woman by mischance have her child dead within her, she shall take *Dittander*, *Pelison*, *Pennyroyall*, and stamp them, and take of each a spoonfull of the juyce, and mixt it with old wine, and give her to drink, and she shall soon be delivered without danger.

Child dead in
the womb.

To make a woman to conceive, let her either drink *Mugwort* steeped in wine, or else the powder thereof mixed with wine, as shall best please her taste.

Apocis to
conceive.

Take the powder of *Corall* finely ground, and eat it in a reas egg, and it will stay the flux.

Additions to
womens infir-
mities.

Against womens terms, make a pessary of the juce of *Mugwort*, or of the water that is so sodden in, and apply it; but if it be the flux of the flowers, take the juce of *Plantane*, and drink it in red wine.

To cease wo-
mens flowers.

Take a Fomentation made of the water wherein the leaves and flowers of *Tusson* is sodden, to drink up the superfluities of the matrix, it cleanseth the entrance; but this herb would be gathered in harvest; if the woman have pain in the matrix, set her the fire, water that *Anemone* hath been sodden in, and of the decoction make a pessary, and it will give ease.

Against the
flowers.
For the ma-
trix.

Take

A general
purge for a
woman in
child-bed.

To deliver
the dead birth
To increase
milk.

For a woman
that is new
brought in
bed, and
swooneth
much.

To provoke
sleep
For sore breasts.

For morpew
of both kinds.

To breed hair.

For the Gout.

Take two or three eggs, and they must be neither roost nor raw, but between both, and then take butter that Salt never came in, and put into the eggs, and sup them off, and eat a piece of brown bread to them, and drink a draught of small Ale.

Take the root of *Aristolochia rotunda*, and boyl it in wine and oil, make a fomentation thereof, and it helps.

Take the buds and tender crops of Briony, and boyl them in broth or pottage, and let the woman eat thereof, it is sovereign.

Take Mugwort, Motherwort, and Mints, the quantity of a handfull in all, seeth them together in a pint of Malmsey, and give her to drink thereof two or three spoonfulls at a time, and it will appease her swooning.

Take Henbane stamped and mixt with Vinegar, and apply it plaister-wise over all the forehead, and it will cause sleep.

Take Sage, Smallage, Mallows, and Plantane, of each an handfull, beat them all well in a mortar, then put unto them catmeal and milk, and spread it on a fine linnen cloth, an inch thick, and lay it to the breast or breasts, or otherwise, take white bread leaven, and strain it with cream, and put thereto two or three yelks of eggs, sallet oyl, or oyl of Roses, and put it upon a soft fire, till it be warm, and so apply it to the breast.

For Morpew, whether it be white or black, take of the Li-charge of gold a dram, of sun wrought brimstone two drams, beat them into fine powder, then take of the oyl of Roses and Swine greafe, of each a like quantity, and grind them all together with half a dram of Camphire, and a little Vinegar, and anoint the same therewith morning and evening.

To breed hair, take Southernwood, and burn it to ash, and mixt it with common oyl, then anoint the bald place therewith morning and evening, and it will breed hair exceedingly.

To Cure the Gout, take *Aristolochia rotunda*, *Thibee*, *Echony*, and the roots of wild birch, and the roots of the wild Dock, cut in pieces, and the upper end is taken away of each a like quantity, boyl them in running water, till they be soft and thick: then stamp them in a mortar, as small as may be, and put

put thereto a little quantity of chimney soot, and a pint of new milk of a Cow, which is all of one intire colour, and as much of the urine of a man that is fasting, and having stirred them all well together, boil them once again on the fire, then as hot as the party can suffer it, apply it to the grieved place, and it will give him ease.

For the Sciatica, take of mustard seed a good handful, and as much of white hony, and as much weight of figs, and crums of white bread half so much, then with strong vinegar beat it in a mortar till it come unto a salve; then apply it unto the grieved place, and it will give the grieved party ease, so will also a plaister of Oxicrotium, if it be continually warm upon the same.

To help all manner of swelling or aches in what part of the body soever it be, or stinging of any venomous beast, as Adder, Snake, or such like; take Hore-hound, Smallage, Porrets, small Mallows, and wild Tansy, of each a like quantity, and bruise them or cut them small: then seeth them altogether in a pan, with milk, oarmeal, and as much sheeps suet, or dears suet, as a Hens egg, and let it boile till it be thick plaister, then lay it upon a blew woollen cloth, and lay it to the griefe, as hot as one can suffer it.

For any swelling in the legs or feet, take a good handful of water-cresses, and shred them small, and put them in an earthen pot: and put thereto thick Wine lees, and wheat bran, and Sheeps suet, of each of them a like quantity, and let them boyle together untill they be thick; then take a linnen cloth, and bind it about the sore and swelling, as hot as the party grieved can endure it, and let it remain on a whole night and a day without any removing, and when you take it away, lay to it a fresh plaister, hot as before, and it will take away both the pain and the swelling. Other Chirurgions for this grief, take hony and beer, and heat them together, and therewith bathe the swelling morning and evening.

To wash any sore or Ulcer, take running water, and Bole-arme, sack and Camphire, and boile them together, and dip in a cloth, wash a sore and lay it to the sore, as hot as may be endured: also Plantane water is good to kill the heat of any sore: or if you take Woodbine leaves, and bruise them small, it will heal a sore: or if you

wash a sore with verjuice, that hath been burnt or scalded, it is a present remedy.

A pultis for a sore.

There be divers others, which for this grieve take the green of Goose dung, and boyl it in fresh butter, then strain it very clean and use it. And Sallet oyl, and Snow water beaten together, will cure any scald or burning.

For any old sore.

To cure any old sore low grievous soever it be, take of new milk three quarts, & a good handful of Plantane, and let it boyl till a pint be consumed; then add three ounces of Allom made in powder, and an ounce and a half of white Sugar candy powdered. Also then let it boyl a litle till it have a curd, then strain it, with this warm, wash the Ulcer, & all the members about it: then dry it, and lay upon the Ulcer *Unguentum Basilicon*, spread on lint, and your *diminium* playster over it, for this strengtheth and killeth the itch; but if you find this is not sharp enough, then take of milk a quart, Allom in powder two ounces, Vinegar a spoonful; when the milk doth seeth, put in the A'lom and Vinegar, then take off the curd, and use the rest as was before said, and it will cure it.

For any scabs or itch.

For scabs, or itch, take *Unguentum Populion*, and there with a-noint the party, and it will help; but if it be more strong and rank, take an ounce of Nerve oyl, and three pennyworth of quicksilver, and beat and work them together, untill you see that assuredly the quick silver is killed, then let the party anoint therewith the palms of his hands, the boughs at his elbowes, his arm-pits, and hams, and it will cure all his body.

For the leprosie.

To cure the leprosie take the juyce of Colsworts, and mix it with Allom and strong Ale, and anoint the Leper therewith morning, and evening, and it will cleanse him wonderfully, especially if he be purged first, and have some part of his corrupt blood taken away.

To take away pimples.

To take away either pimples from the face, or any other part of the body, take virgin wax, and *Sperma Ceti*, of each a like quantity, and boyl them together, and dip in a fine linnen cloth, and as it cools, dip it well of both sides, then lay upon it another fair cloth upon a table, and then fold up a cloth in your hands, and all to slight it with the cloth, then take as much as will cover the grieved place.

If any man have his privy parts burnt, take the ashes of a fine linnen cloth in good quantity, and put it into the former oyle of eggs, and anoint the fore member therewith, and it will cure it. Privy parts burnt.

For any burning, take six new laid eggs and roast them very hard, and take out the yelks thereof and put them into an earthen pot, and set it over the fire on hot embers, and then whilst the eggs look black, stir them with a slice untill they come to an oyl, which oyl take, clarify, and put it into a glass by it self, and therewith anoint the burning and it will cure it. For any burning.

For any scalding with hot water, oyl, or otherwise, take good cream, and set it on the fire, and put into it the green which growes on a stone wall; take also Yarrow, the green of Elder bark and fire grafs, and chop them small, then put them into the cream, and stir it well till it come to an oyl salve, then strain it and anoint the fore with it. For any scalding.

To dry up any sore, take Smallage, Groundfil, wild Mallowes, and Violet leaves; chop them small, and boyl them in milk with bruised Oatmeal and Sheeps suet, and so apply it to the sore. A pultis to dry a sore.

To eat away dead flesh, take Stubblewort, and sold it up in a red dock leaf, or red wort leaf, and so rost it in the hot embers, and so lay it to the sore, and it will fret away all the dead flesh; or otherwise, if you strew upon the sore a little Precipitate, it will eat away dead flesh. To eat away dead flesh.

To make a water to heal all manner of wounds, you shall take Jupt-worts flowers, leaves and roots, and in March or Aprill, when the flowers are at the best, distill it; then with that water bathe the wound, and lay a linnen cloth wet therewith in the wound, and it will heal it. A water to heal wounds.

To heal any wound or cut in any flesh or part of the body, First, if it be fit to be stich'd, stich it up, and then take *Unguentum Aurum*, and lay it upon a pleagant of lint as big as the wound, and then over it a *diminium* plaister made of Sallet oyl and red lead, and so dress it at least once in four and twenty hours; but if it be a hollow wound, as some thrust in the body, or other members, then you shall take *Balsamum Cephalicum*, and warming it on a chafingdish of coals, dip the tent therein, and

and so put it into the wound, then lay your plaister of Diminium over it, and do thus at least once a day untill it be whole.

For sinews cut
or shrunk.

If a mans sinews be cut or shrunk, he shall go to the root of the wild Nep, which is like Woodbine, and make a hole in the midst of the root, then cover it well again that no air go out nor in, nor other moisture; thus let it abide a day and a night, then go and open it, and you shall find therein a certain liquor, then take out the liquor and put it into a clean glass, and do thus every day whilst you find any moisture in the hole; and this must only be done in the months of *April* and *May*, then anoint the sore therewith against the fire, then wet a linnen cloth in the same liquor, and lap it about the sore, and the vertue will soon be perceived.

To break any
Impostume.

To break any Imposthume, and to ripen it, only take the green Melilot plaister, and lay it thereunto; and it is sufficient.

Of general
infirmities of
Chyrurgery;
and first of
burnings and
scalding.
For burning
or scalding,
with either
Liquor or
Gunpowder.

Take Plantane water, or Sallet oyl, and running water beaten together, and therewith anoint the sore with a feather, till the fire be taken out, then take the whites of eggs, and beat them to oyl; which done, take a hares skin and clip the hair into the oyl, and make it as thick as you may spread it upon a fine linnen cloth, and so lay it upon the sore, and remove it not, untill it be whole, and if it any rise up of it self, clip it away with your shears, and if it be not perfectly whole, then take a little of the oymntment, and lay it unto the same place again: otherwise take half a bushel of Glovers threads of all sorts, and so much of running water, as shall be thought convenient to seeth them, and put thereto a quarter of a pound of Barrows grease, and take half a bushel of the down of Cats tails; and boyl them altogether, continually stirring them, untill they be sodden, that they may be strained into an earthen pot or glasse, and with it anoint the sore.

For burnings
or scaldings
on the face.

Or else take Caprifolium, Mouse-ear, ground Ivy, and Hens dung, the reddest or the yellowest, and fry them with May butter altogether, untill it be brown, then strain it through a clean cloth, and anoint the sore therewith.

Take the middle rind of the Elm tree, and lay it two or three hours

hours in fair running water, till it wax ropy like glew, and then anoint the sore therewith. Or otherwise, take sheeps tallow, and sheeps dung, and mix them together till they come to a salve, and then apply it to the sore.

Take Plantane leaves, Daisie leaves, the green bark of Elders, and green Germanders, stamp them altogether with fresh butter, or with oyl, and strain it through a linnen cloth, and with a feather anoint the sore till it be whole. An ointment for burning.

Take of the oyl Olive a pint, Turpentine a pound unwrought, Wax half a pound, Rosen a quarter of a pound, Sheeps suet two pounds; then take of Orpents, Smallage, Ragwort, Plantane, and Sicklewort, of each a good handful, chop all these herbs very small, and boyl them in a pan altogether upon a soaking fire, and stir them exceeding much, untill they be well incorporated together, then take it from the fire, and strain all through a strong canvas cloth into clean pots, or glasses, and use it as your occasion shall serve, either to anoint, tent, or plaister.

Or otherwise, take Popler buds, and Elder buds, stamp and strain them, then put thereto a little Venice Turpentine, Wax, and Rolin, and so boyl them together, and therewith dress the sore. Or else take two handfuls of Plantane leaves, bray them small, and strain out the juyce, then put to it as much worians milk, a spoonful of hony, a yelk of an Egg, and as much wheat flower as you think will bring it to a salve: then make a plaister thereof, and lay it unto the sore, renewing it once in four and twenty hours. Ulcers and sores.
A salve for any old sore.

Take an ounce of *Unguentum Apostolorum*, and an ounce of *Unguentum Aegyptiacum*, and put them together in a pot, being first well wrought together in a bladder; and if the flesh be weak, put into it a little fine white Sugar, and therewith dress the sore; or otherwise, take only Precipitate in fine powder, and strew it on the sore. To take away dead flesh.

Take a gallon of Smiths sleak water, two handfuls of Sage, a pint of Hony, a quart of Ale; two ounces of Allom, and a little white Copperas, seeth them altogether till half be consumed, then strain it, and put it into a clean vessel, and therewith wash the sore. A water for a sore.

fore. Or otherwise, take cleane running water, and put therein Roch Allom, and Madder, and let them boyl till the Allom and the Madder be consumed, then take the clearer of the water, and therewithall wash the fore.

Or else take Sage, Fennel, Cinquefoil, of each a good handfull, boyl them in a gallon of running water till they be tender, then strain the liquor from the herbs and put it to a quarter of a pound of Roch Allom, and let it seeth again a little, till the Allom be melted, then take it from the fire, and use it thus: dip lint in it warme, and lay it to the fore; and if it be hollow, apply more lint, then take a little bolster of linnen cloth, and wet it well in the water, then wring out the water, and so bind on the bolster close.

A black plaister to heal old sores, and kill inflammations.

Take a pint of sallet oyl, and put into it six ounces of red lead, and a little cerusse or white lead, then set it over a gentle fire, let it boyl a long season, stirring it well till it be stiff, which you shall try in this order; let it drop from your stick or slice, upon the bottom of a saucer, and so stand untill it be cold, and then if it be well boyled, it will be stiff and very black, then take it off and let it stand a little, and after strain it through a cloth into a bason, but first anoint the bason with sallet oyl, and also your fingers, and so make it up into rouls plaisterwise, and spread it, and apply it as occasion shall serve.

An oymntment to ripen sores.

Take Mallows and Beets, and seeth them in water, then dry away the water from them, and beat the herbs well with old Boares grease, and so apply it unto the Apostume, hot.

For the stinging by any venomous thing.

Take a handfull of Rue, and stamp it with rusty bacon till it come to a perfect salve, and therewith dresse the fore till it be whole.

For a venom.

If the party be outwardly venomd, take Sage, and bruise it well, and apply it unto the sore, renewing it at least twice a day, but if he be inwardly, then let the party drink the juyce of Sage, either in Wine or Ale morning and evening.

For a Ring-worm.

Take Celandine early in the morning, and bruise it well, and then apply it to the sore, and renew it twice or thrice a day.

Take of Camphire one dram, of Quicksilver four pennyworth, killed

killed well with Vinegar, then mixt it with two penny worth of Oyl de Bay, and therewith anoint the body. Or otherwise, take red Onions, and seeth them in running water a good while; then bruise the Onions small, and with the water they were sodden in, strain them in, and then wash the infected place with the same.

Take a great quantity of the herb Bennet, and as much of red Nettles, pound them well, and strain them, and with the juice wash the patient naked before the fire, and so let it drink in, and wash him again, and do so divers days till he be whole.

Take a penniworth of white Copperas, and as much green Copperas, a quarter of an ounce of white Mercury, a half penny-worth of Allom, and burn it, and set all over the fire, with a pint of fair water, and a quart of a pint of wine Vinegar, boyl all these together till they come to half a pint, and then anoint the sore therewith.

Take Barrowes greasse a pretty quantity, and take an apple and pare it, and take the coar clean out, then chop your apple and your Barrowes grease together, and set it over the fire that it may melt, but not boyl; then take it from the fire, and put thereto a pretty quantity of rose water, and stir all together till it be cold and keep it in a clean vessell, and then anoint the face therewith.

Take Quick silver, and kill it with fasting spittle; then take Verdigrease, Arabick, Turpentine, Oyl Olive, and Populion, and mix them together to one intire oyntment, and anoint the sores therewith, and keep the party exceeding warm. Or otherwise, take of Allom burned, of Rosin, Frankincense, Populion, Oyl of Roses Oyl de Bay, Oyl Olive, green Copperas, Verdigrease, White Lead, Mercury sublimate, of each a pretty quantity, but of Allom most; then beat to powder the simples that are hard, & melt your oyls, and cast in your powder, and stir all well together; then strain them through a cloth, and apply it warm to the sores; or else, take of Capons grease that hath toucht no water, the juyce of Rue, and the fine powder of Pepper, & mix them together to an ointment, and apply it round about the sores, but let it not come in to the sores; and it will dry them up.

Take

To put out
the French pox
Spanish pox.

Take Treacle half a penny worth, of long Pepper as much, and of Grains as much, a little Ginger, and a little quantity of Licoris, warm them with strong Ale, and let the party drink it off, and lie down in his bed, and take a good sweat, and then when the sores arise, use some of the ointment before rehearsed.

To make the
scabs of the
French pox
to fall away.

Take the juyce of red Fennel, and the juyce of Seagreen, and Stone-honey, and mix them very well together till it be thick, and with it anoint the party; but before you do anoint him, you shall make this water, Take Sage, and seeth it in very fair water, from a gallon to a pottle, and put therein a quantity of honey, and some allom, and let them boyl a little together; when you have strained the herbs from the water; then put in your honey and your allom, and therewith wash the pox first, and let it dry in well, and then lay on the aforesaid ointment.

Addition to
green wounds.

Take the oyle of the white of an egg, wheat-flower, a little hony, and Venice turpentine, take and stir all these together, and use it about the wound, but not within; and if the wound do bleed, then add to this salve, a little quantity of Bole-armenick.

A defensive for
a green wound.

A salve for a
green wound.

Take *Op penax* and *Galbanum*, of each one ounce, *Amoniacum*, and Bedlind, of each two ounces, of Licharge of gold one pound and an half, now wax half a pound, *Lapis Calaminaris* one ounce, Turpentine four ounces, Myrrhe two ounces, oyl of bay r ounce, Thuls one ounce, *Aristolochia* roots two ounces, oyl of Roses two ounces, faller oyl two pound. All the hard Simples must be beaten to fine powder, and searfed; take also three pints of right white vinegar, and put the four gums into the vinegar, a whole day before, till the gums be dissolved, then str it over the fire, and let it boyl very softly, untill your vinegar be as good as boyled away; then take an earthen pot with a wide mouth, and put your oyl in, and your wax, but your wax must be scraped before you put it in; then by a little at once put your Licharge, and stir it exceedingly; then put in all your gums, and all the rest, but let your Turpentine be last, and so let it boyl till you see it grow to be thick; then pour it into a bason of water, and work it with oyl of Roses for a while unto your hands, and strake up in rough plaster-wife; and here is to be noted, that your oyl of Roses must

not

not

not be boyled with the rest, but after it is taken from the fire, a little before the Turpentine.

Take three good handfals of Sage, and as much of Honisuckle leaves, and the flowers clean picked; then take one pound of Roch Allom, and a quarter of a pound right *English Honey* clarified, half a peenniworth of grains, two gallons of running water; then put all the said things into the water, and let them seeth till half be consumed; then take it from the fire till it be almost cold, and strain it through a clean cloth, and put it up in a glass; and then on teint or pleagant, use it as you have occasion.

A Water to heal any green wound, cut, or sore.

Take a quart of Ric flower, and temper it with running water, and make dough thereof, then according to the bigness of the wound, lay it within the defensive plaister before rehearsed, over it, and every dressing make it less and less till the wound be closed.

To staunch blood, and draw sinews together.

Take a quart of Neats-foot Oyl, a quart of Ox galls, a quart of *Aqua-vite*, a quart of Rose water, a handful of Rosemary stript, and boyl all these together till half be consumed, then press and strain it, and use it according as you find occasion.

A made Oyl for shrinking sinews.

Take Honey, Pitch, and Butter, and seeth them together, and anoint the hurt against the fire, and tent the sore with the same.

For a wound in the Guts.

Take groundsl and stamp it, and seeth it with sweet milk till it be thick, then temper it with black Sope, and lay it to the sore.

For pricking with a thorn.

Take Rosin a quarter of a pound, of Wax three ounces, of Oyl of Roses one ounce and a half, seeth them all together in a pint of white Wine till it come to skimming; then take it from the fire, and put thereto two ounces of Venice Turpentine, and apply it to the wound or sore.

To gather flesh in wounds.

Take Mustard with strong Vinegar, the crums of brown bread, with a quantity of honey, and six Figs mixt, temper all together well, and lay it upon a cloth plaister-wise; put a thin cloth between the plaister and the flesh, and lay it to the place grieved, as oft as need requires.

Additions for ache or swelling.

Take a pound of fine Rosin, of oyl *de bay* two ounces, of *Populion* as much, of Frankincense half a pound, of oyl of Spike two ounces, of oyl of Camomile two ounces, of oyl of Roses 2 ounces,

A yellow Scar-cloth for any pain or swelling.

ces, of Wax half a pound, of Turpentine a quarter of a pound, melt them and stir them well together, and then dip Linnen cloths therein, and apply the Scar-cloth as you shall have occasion. And Note, The more oyl you use, the more supple the Scar-cloth is, and the less oyl, the stiffer it will be.

For bruises
swelled.

Take a little black Sope, Salt and Honey, and beat them well together, and spread it upon a brown paper, and apply it to the bruise.

For swelled
Legs.

Take Mallows and seeth them in the dregs of good Ale or Milk, and make a plaister thereof, and apply it to the place swelled.

For any ache.

Take in the month of May Henbane, and bruise it well, and put it into an Earthen pot, and put thereto a pint of Sallet Oyl, and sit it in the Sun till it be all one substance, then anoint the ache therewith.



A Plaister for
any pain in
the Joynts.

Take half a pound of unwrought Wax, as much Rosin, one ounce of *Galbanum*, a quarter of a pound of Litharge of gold, three quarters of white lead, beaten to powder and sear'd, then take a pint of Neats-foot oyl, and set it on the fire in a small Vessel which may contain the rest, and when it is all moulten, then put in the powders, and stir it fast with a slice, and try it upon the bottom of a saucer, when it beginneth to be somewhat hard; then take it from the fire, and anoint a fair board with Neats-foot oyl, and as you may handle it for heat, work it up in roulds, and it will keep five or six years, being wrapped up close in paper, and when you will use it, spread of it thin upon new Lockram or Leather, somewhat bigger then the grief, and so if the grief remove, follow it, renewing it morning and evening, and let it be somewhat warm when it laid on, and beware of taking cold, and drinking hot Wines.

For bones out
of joynt, or
sinews sprung
or sprained.

Take four or five yelks of eggs hard sodd'n or roasted, and take the branches of great Morrell, and the Berries in Summer, and in the Winter the roots, and bray all well together in a Mortar with sheeps milk, and then fry it until it be very thick, and so make a plaister thereof, and lay it about the fore, and it will take away both pain and swelling.

Take

Take a gallon of standing Lye, put to it of Plantane and Knot-grass, of each two handfuls, of Wormwood and Comfrey, of each a handfull, and boyl all these together in the lye a good while, and when it is luke-warm, bathe the broken member therewith, and take the buds of the Elder gathered in *Mareh*, and strip it downward, and a little boyl them in Water, then eat them in Oyl, and a very little Wine Vinegar, a good quantity at a time in the morning ever before meat, or an hour before the Patient go to dinner, and it much avails to the knitting of bones.

A bath for broken Joints.

Take Rosemary, Fetherfew, Orgain, Pellitory of the Wall, Fennel, Malloves, Violet leaves and Nettles, boyl all these together, and when it is well sodden, put to it two or three gallons of milk, then let the party stand or sit in it an hour or two, the bath reaching up to the stomach, and when they came out, they must go to bed and sweat, and beware taking of cold.

A general bath for clearing the Skin, and comforting the body.

Make a Plaister of Wheat flower, and the whites of Eggs, and spread it on a double linnen cloth, and lay the plaister on an even board, and lay the broken limb thereon, and set it even according to Nature, and lay the plaister about it and splint it, and give him to drink Kintwort, the juyce thereof, twice and no more, for the third time it will unknit, but give him to drink nine daies, each day the juyce of Comfrey, Daffies, and Osmund, in stale Ale, and it shall knit, and let the foresaid plaister lie on ten daies at the least: and when you take it away do thus: Take Horehound, red Fennel, Hounds tongue, Walwort, and Pellitory, and seeth them; then unroul the member, and take away the splints; and then bath the linnen and the plaister about the member in this bath, till it hath soakt so long, that it come gently away of it self, then take the aforesaid plaister, and lay thereto five or six daies very hot, and let each plaister lie a day and a night, and alwaies splint it well, and after cherish it with the Oyniments before rehearsed for broken bones, and keep the party from unwholesome meats and drinks till he be whole: and if the hurt be on his arm, let him bear a ball of green herbs in his hand to prevent the shrinking of the hand and sinews.

A soveraign help for broken bones.

For any Feaver.

Take Sage, Ragwort, Yarrow, unset Leeks, of each a like quantity, stamp them with Bay-salt, and apply them to the wrists of the hand.

To expeel heat in a Feaver.

Blanch Almonds in the cold water, and make Milk of them, (but it must not seet) then put to it Sugar, and in the extremity of heat, see that you drink thereof.

The Royal Medicine for Feavers.

Take three Spoonfuls of Ale, and a little Saffron, and bruise and strain it thereto, then add a quarter of a Spoonful of fine Treacle, and mix altogether, and drink it when the fit comes.

Another.

Take two roots of Crowfoot that grows in a marsh ground, which have no little roots about them, to the number of twenty or more, and a little of the earth that is about them, and do not wash them, and add a little quantity of Salt, and mix it well together, and lay it on linnen cloths, and bind it about your thumbs, betwixt the first and the neather joynt, and let it lie nine daies unremoved, and it will expell the Feaver.

An approved Medicine for the greatest Lask or Flux.

Take a right pomwater, the greatest you can get, or else two little ones, roast them very tender to pap, then take away the skin and the core, and use only the pap, and the like quantity of Chalk finely scraped, mix them both together upon a Trencher before the fire, and work them well to a Plaister; then spread it upon a linnen cloth warmed very hot as may be sufficed, and so bind it unto the Navil for twenty four hours, use this Medicine twice or thrice, or more; untill the Lask be stayed.

Of Oyl of Swallows.

To make the Oyl of Swallows, take Lavender-cotten, Spike-Knot-grass, Ribwort, Balm, Valerian, Rosemary tops, Woodbine tops, Vine strings, French-Mallows: the tops of Alecost, Strawberry strings, Tutfan, Plantane, Walnut Tree leaves, the tops of young Beets, Hop, Violet leaves, Sage of vertue, fine Roman Wonnwood, of each of them a handful, Camomile, and

red Roses, of each two handfuls, twenty quick Swallows, and beat them together in a Mortar, and put to them a quart of Neats-foot oyl, or May butter, and grind them all well together with two ounces of Cloves well beaten; then put them all together in an earthen pot, and stop it very close, that no air come into it, and set it nine daies in a Cellar, or cold place, then open your pot, and put into it half a pound of white or yellow Wax, cut very small, and a pint of Oyl or Butter; then set your pot close stopped into a pan of Water, and let it boyl six or eight hours, and then strain it: This Oyl is exceeding soveraign for any broken bones, bones out of joynt, or any pain or grief either in the bones or sinews.

To make Oyl of Camomile, take a quart of Sallet Oyl, and put it into a glass, then take a handfull of Camomile, and bruise it, and put into the Oyl, and let them stand in the same, twelve daies; onely you must shift it every three daies, that is, to strain it from the old Camomile, and put in as much of new, and that Oyl is very soveraign for any grief, proceeding from old causes.

To make Oyl
of Camomile.

To make Oyl of Lavender, take a pint of Sallet Oyl, and put it into a glass, then put to it a handfull of Lavender, and let it stand in the same twelve daies, and use it in all respects, as you did your Oyl of Camomile.

To make Oyl
of Lavender.

To make an Oyl which shall make the skin of the hands very smooth, take Almonds, and beat them to oyl, then take whole Cloves, and put them both together in a glass, and set it in the Sun five or six daies, then strain it, and with the same anoint your hands every night when you go to bed, or otherwise as you have convenient leisure.

To make
Smooth hands

To make that soveraign Water, which was first invented by Dr. Stephens, in the same form as he delivered the Receipt to the Archbishop of Canterbury, a little before the death of the said Doctor. Take a gallon of good Galcoyn Wine, then take Ginger, Galangale, Cinamon, Nutmegs, Grains, Cloves bruised, Fennel-seeds, Caraway-seeds, Origanum, of every of them a like quantity; that is to say, a dram; then take Sage, wild Marjoram, Pney-royal, Mint, Red Roses, Thyme, Pellitory, Rosemary, Wild Thyme, Camomile, Lavender, of each of them a hand-

To make Dr.
Stephens water.

handful; then bray the Spices small, and bruise the herbs, and put all into the Wine, and let it stand so twelve hour, onely stir it divers time; then distill it by a Lymbeck, and keep the first water by it self, for that is the best; then keep the second water, for that is good, and for the last, neglect it not, for it is very wholesome, though the worst of the three.

Now for the vertue of this Water, it is this; It comforteth the spirits and vital parts, and helpeth all inward diseases that come of cold; it is good against the shaking of the Palsie, and cureth the contraction of the Sinews, and helpeth the Conception of Women that be barren, it killeth Worms in the Body; it cureth the cold Cough, it helpeth the Tooth-ach, it comforteth the stomach, and cureth the old Dropisie, it helpeth the stone in the Bladder, and in the Reins, it helpeth a stinking Breath: and whosoever useth this Water moderately, and not too often, it preserveth him in good liking, and will make him seem young in old age. With this Water Doctor Stephens preserved his own life, until such extreame age, that he could neither go nor ride; and he continued his life, being bed-rid five years, when other Physicians did judge he could not live on year; when he did confess a little before his death, saying, *That if he were sick at any time, he never used any thing but this Water onely.* And also the Archbishop of Canterbury used it, and found such goodnesse in it, that he lived till he was not able to drink out of a Cup, but suck-ed his drink through a hollow Pipe of Silver.

This Water will be much the better if it be set in the Sun.

A restorative
of *Rosa-solis*.

To make a Cordial *Rosa-solis*, take *Rosa-solis*, and in any wise touch not the leaves thereof in the gathering; nor wash it; take thereof four good handfuls, then take two good pints of *Azu-vise*, and put them into a glass or pewter pot of three or four pints, and then stop the same hard and just, and so let it stand three days and three nights, and the third day, strain it through a clean cloth into another glass, or pewter pot, and put thereto half a pound of Sugar beaten fine, four ounces of fine L. coras beaten into powder, half a pound of sound Dates, the Stones being taken out, and cut them and make them cleane, and then mince them small, and mix all these together, and stir

the glass or pot close and fast, and after distill it through a Lymbeck, then drink of it at night to bedward, half a spoonfull with Ale or Beer, but the Ale is the better, as much in the morning fasting, for there is not the weakest body in the world that wanteth nature or strength, or that is in a consumption, but it will restore him again, and cause him to be strong and lusty, and to have a marvellous hungry stomach, provided alwaies that this *Rosa solis* be gathered (if possibly) at the full of the Moone, when the Sun shineth before noon, and let the roots of them be cut away.

Take the flowers of Roses or Violets, and break them small, and put them in Sallet Oyl, and let them stand in the same ten or twelve daies, and then press it. Or otherwise take a quart of Oyl Olive, and put thereto six spoonfulls of clean water, and stir it well with a slice, till it wax as white as milk; then take

two pound of red Rose leaves, and cut the white of the ends of the leaves away, and put the Roses into the Oyl, and then put it into a double glass, and set it in the Sun all the Summer time, and it is soveraign for any scalding or burning with Water or Oyl.

Or else take red Roses new plucked, a pound or two, and cut the white ends of the leaves away, then take May butter, and melt it over the fire with two pound of Oyl Olive, and when it is clarified, put in your Roses, and put it all in a vessel of glass, or of earth, and stop it well about, that no air enter in or out, and set it in another vessel with water, and let it boyl half a day or more, and then take it forth and strain or press it through a cloth, and put it into glass bottles: this is good for all manner of unkind heats.

Take two or three pound of Nutmegs, and cut them small, and bruise them well; then put them into a pan, and beat them, & stir them about, which done, put them into a canvas or strong linnen bag and close them in a press, and press them, and get out all the liquor of them, which will be like *Manna*; then scrape it from the canvas bag, as much as you can with a knife; then put it into some vessel of glass, and stop it well, but set it not in the Sun, for it will wax clean of it self, within 10 or 15 daies,

and

Additions to
the Oyls.
To make Oyl
of Roses or
Violets.

To make Oyl
of Nutmegs.

and it was worth thrice so much as the Nutmegs themselves, and the Oyl hath very great vertue in comforting the stomach and inward parts, and asswaging the pain of the Mother, and Sciatica.

To make perfect Oyl of Spike.

Take the flowers of Spike, and wash them only in Oyl Olive, and then stamp them well, then put them in a canvass bag, and press them in a press as hard as you can, and take that which commeth out, carefully, and put it into a strong vessel of glass, and set it not in the Sun, for it will clear of it self, and wax fair and bright, and will clear of it self, and will have a very sharp odour of the Spike; And thus you may make Oyl of other herbs of like nature, as Lavender, Camomile, and such like.

To make Oyl of Mastich.

Take an ounce of Mastich, and an Ounce of Olibanum pounded as small as is possible, and boyl them in Oyl Olive (a quart to a third part,) then press it, and put it into a glass, and after ten or twelve daies it will be perfect: it is exceeding good for any cold grief.

Thus having in a summary manner passed over all the most Physical and Chyrurgical Notes, which burthen the mind of our *English House-wife*, being as much as is needful, for the preservation of the health of her Family; and having in this Chapter, shewed all the inward vertues wherewith she should be adorned: I will now return unto her more outward and active knowledges, wherein albeit the mind be as much occupied as before, yet is the body a great deal more in use: neither can the work be well effected by rule or direction.

The



The *English House-Wifes* Skill in COOKERY.

CHAP. I.

Of the outward and active Knowledge of the House-wife, and of her Skill in Cookery, as Sallets of all sorts, with Flesh, Fish, Sauces, Pastery, Banquetting-stuff, and ordering of great Feasts.

TO speak then of the outward and active Knowledges which belong to our *English House-Wife*, I hold the first and most principal to be, a perfect skill and knowledge in Cookery, together with all the secrets belonging to the same, because it is a duty well belonging to Women; and she that is utterly ignorant therein, may not by Laws of strict Justice challenge the freedom of Marriage, because indeed she can then but perform half her vow: for she may live and obey, but she cannot cherish, serve and keep with that true duty which is ever expected.

To proceed then to this Knowledge of Cookery, you shall understand, that the first step thereunto is, to have knowledge of all sorts of Herbs belonging unto the Kitchin; whether they be for the Pot, for Sallets, for Sauces, for servings, or for any other seasoning or adorning; which skill of knowledge of the herbs, she must get by her own true labour and experience, and not by my relation, which would be much too tedious; and for the use of them, she shall see it in the composition of dishes and meat hereafter following. She shall also know the time of the year, month and Moon, in which all Herbs are to be sown; and when they are in their best flourishing, that gathering all Herbs in their

H h h

height

height of goodness, she may have the prime use of the same. And because I will enable and not burden her Memory, I will here give her a short Epitomy of all that Knowledge.

Her skill in
the Garden.

First then, let our *English House-wife* know, that she may then at all times of the month and Moon generally sow Asparagus, Coseworts, Spinage, Lettuce, Parsnips, Raddish, and Chives.

In *February*, in the New of the Moon, she may sow Spike, Garlick, Borage, Bugloss, Chervile, Coriander, Gourds, Cresses, Marjerom, *Palma Christi*, Flower-gentle, white Poppy, Purslane, Radish, Rocket, Rosemary, Sorrel, double Marigolds and Thyme. The Moon full she may sow Anniseed, Musk'd Violets, Beets, Skirrits, white Succory, Fennel, and Parsley. The Moon old, sow Holy Thistle, Cole Cabbage, white Cole, green Cole, Cucumers, Hartshorn, Dyers grain, Cabbage, Lettuce, Mellons, Onions, Parsnips, Larks-heel, Burnet, and Leeks.

In *March*, the Moon new sow Garlick, Borage, Bugloss, Chervile, Coriander, Gourds, Majerom, white Poppy, Purslane, Radish, Borrel, double Marigolds, Thyme, Violets. At the full Moon, Anniseed, Beets, Skirrits, Succory, Fennel, Apples of Love, and Marvellous Apples. At the wain, Hartichokes, Basil, Blessed-Thistle, Cole Cabbage, white Cole, green Cole, Citrons, Cucumers, Harts-horn, Samphire, Spinage, Gilly-flowers, Hyssop, Cabbage, Lettuce, Mellons, Mugrets, Onions, Flower-gentil, Burnet, Leeks, and Savory.

In *May*, the Moon old, Sow blessed thistle.

In *June*, the Moon new, Sow Gourds and Radishes. The Moon old, Sow Cucumers, Mellons, Parsnips.

In *July*, the Moon at full, Sow white Succory; and the Moon old, sow Cabbage, Lettuce.

Transplanting
of Herbs.

Lastly, in *August*, the Moon at the full, Sow white Succory. Also she must know, that Herbs growing of Seeds may be translated at all times, except Chervile, Arage, Spinage and Parsley, which are not good being once transplanted: observing ever to transplant them in moist and rainy weather.

Choice of
Seeds.

Also she must know, that the choice of seeds are two-fold, of which some grow best being new; as Cucumers and Leeks, and some

some being old, as Coriander, Parsley, Beets, Organ, Savory, Cresses, Spinage, and Boppy : you must keep cold Lettuce, Artichokes, Basil, Holy thistle, Cabbage, Cole, Dyers grain, and Mellons fifteen daies after they put forth of the earth.

Also Seeds prosper better being sown in temperate weather then in hot, cold or dry daies. In the Month of *April* the Moon being new, sow Marjerom, Flower-gentle, Thyme, Violets. In the full Moon, Apples of Love, and marvellous apples ; and in the Wain, Artichoaks, Holy thistle, Cabbage, Cole, Citrons, Harts-horn, Samphire, Gillyflowers and Parinips.

Seeds must be gathered in fair weather at the Wain of the Moon, and kept some in Boxes of Wood, some in bags of Leather, and some in Vessels of Earth, and after to be well cleansed and dryed in the Sun or shadow. Othersome, as Onions, Chibols and Leeks, must be kept in their husks. Lastly, she must know, that it is best to plant in the last quarter of the Moon; To gather grafts in the last but one, and to graft two daies after the change. And thus much for her knowledge briefly of Herbs, and how she shall have them continually for her use in the Kitchen.

Gathering of
Seeds.

It resteth now that I proceed unto Cookery it self, which is the dressing and ordering of meat, in good and wholesome manner ; to which when our House-wife shall address her self, she shall well understand that these qualities must ever accompany it ; First, she must be cleanly both in body and garments, she must have a quick eye, a curious nose, a perfect taste, and ready ear ; (she must not be butter-fingred, sweet toothed, nor faint-hearted) for the first will let every thing fall ; the second will consume what it should encrease ; and the last will lose time with too much niceness.

Of Cookery
and the part
thereof.

Now for the substance of the Art it self, I will divide it into five parts ; The first, Sallets and Fricases ; the second, boyled Meats and Broths ; the third, Roast meats and Carbonadoes ; the fourth, bak't meats and Pyes ; and the fifth, banquetting and made dithes, with other conceits and secrets.

First then to speak of Sallets, there be some simple, some compounded, some only to furnish out the Table, and some both for use and adoration : your simple Sallets are Chibols pilled, washt clean,

Of Sallets,
simple and
plain.

clean ; & half of the green tops cut clean away, and so served on a fruit dish, or Chives, Scallions, Rhadish roots, boyled Carrets, Skirrets and Turnips, with such like served up simply : Also, all young Lettuce, Cabbage-Lettuce, Purslane, and divers other herbs which may be served simply without any thing but a little Vinegar, Sallet Oyl and Sugar ; Onions boyled, and stript from their rind, and served up with Vinegar, Oyl and Pepper, is a good simple Sallet ; so is Camphire, Bean-cods, Sparagus, and Cucumers, served in likewise with Oyl, Vinegar and Pepper, with a world of others, too tedious to nominate.

**Of compound
Sallet.**

Your compound Sallets, are first the young Buds and Knots of all manner of wholsom Herbs at their first springing ; as red Sage, Mint, Lettuce, Violets, Marigold, Spinage, and many other mixed together, and then served up to the Table with Vinegar, Sallet-Oyl, and Sugar.

**Another com-
pound Sallet.**

To compound an Excellent Sallet, and which indeed is usual at great Feasts, and upon Princes Tables : Take a good quantity of blancht Almonds, and with your shredding knife cut them grossly ; then take as many Raisins of the Sun clean washt, and the stones pickt out, as many Figs shred like the Almonds, as many Capers, twice so many Olives, and as many Currants as of all the rest, clean washt, a good handful of the small tender leaves of red Sage and Spinage : mix all these well together with good store of Sugar, and lay them in the bottom of a great dish ; then put unto them Vinegar and Oyl, and scrape more Sugar over all : then take Oranges and Lemmons, and paring away the outward pills, cut them into thin slices, then with those slices cover the Sallet all over ; which done, take the fine thin leaf of the red Cole-flower, and with them cover the Oranges and Lemmons all over ; then over those Red leaves lay another course of old Olives, and the slices of well pickled Cucumers, together with the very inward heart of Cabbage-Lettuce cut into slices ; then adorn the sides of the dish, and the top of the Sallet, with more slices of Lemons and Oranges, and so serve it up.

To make an excellent compound boyl'd Sallet ; take of Spinage,

nage well washt, two or three handfals, and put into it fair water, and boyl it till it be exceeding soft and tender as pap; then put it into a Cullender, and drain the water from it, which done, with the back side of your Chopping-knife chop it, and bruise it as small as may be; then put it into a Pipkin with a good lump of sweet butter, and boyl it over again; then take a good handfull of Currants clean washt, and put to it, and stir them well together; then put to as much Vinegar as will make it reasonable tart, and then with Sugar season it according to the taste of the Master of the house, and so serve it upon sippets.

An excellent
boyled Sallet.

Your preserved Sallets are of two kinds, either prickled, as are Cucumers, Samphire, Purslane, Broom, and such like; or preserved with Vinegar, as Violets, Primroses, Cowslips, Gilly-flowers of all kinds, Broom-flowers, and for the most part any wholesome flower whatsoever.

Of preserving
of Sallets.

Now for the pickling of Sallets, they are only boyled and then drained from the water, spread upon a Table, and good store of salt thrown over them; then when they are thorow cold, make a pickle with water, salt, and a little Vinegar, and with the same put them up in close earthen pots, and serve them forth as occasion shall serve.

Now for preserving of Sallets, you shall take any of the flowers before-said, after they have been pickt clean from their stalks, and the white ends (of them which have any) clean cut away, and washt and dried, and taking a glasse pot, like a Gally-pot, or for want thereof a Gally-pot it self, and first strew a little Sugar in the bottom, then lay a layer of the Flowers, then cover that layer over with Sugar, then lay another layer of the Flowers, and another of Sugar; and thus do one above another till the pot be filled, ever and anon pressing them hard down with your hand: This done, you shall take of the best and sharpest Vinegar you can get, (and if the Vinegar be distill'd Vinegar, the flowers will keep their colours the better) and with it fill up your pot till the Vinegar swim aloft, and no more can be received; then stop up the pot close, and set them in a dry temperate place, and use them at pleasure, for they will last all the year.

Now

The making of
Strange Sal-
lets,

Now for the compounding of Sallets, of these pickled and preserved things, though they may be served up simply of themselves, and are both good and dainty; yet for better curiosity, and the finer adorning of the Table, you shall thus use them; First, if you would set forth any Red flower, that you know or have seen, you shall take your pots of preserved Gilly-flowers, and futing the colours answerable to the flower, you shall proportion it forth, and lay the shape of the Flower in a Fruit dish; then with your Purslane leaves make the green Coffin of the flower, and with the Purslane stalks make the stalk of the flower, and the divisions of the leaves and branches; then with the thin slices of Cucumers, make their leaves in true proportions, jagged or otherwise: and thus you may set forth some full blown, some half blown, and some in the bud, which will be pretty and curious. And if you will set forth yellow flowers, take the pots of Primroses and Cowslips; if blew flowers, then the pots of Violets or Bugloss flowers; and these Sallets are both for shew and use, for they are more excellent for taste, then for to look on.

Sallets for
shew only.

Now for Sallets for shew only, and the adorning and setting out of a Table with number of dishes, they be those which are made of Carret roots of sundry colours well boyled, and cut into many shapes and proportions, as some into Knots, some in the manner of Scutchions, and Arms, some like Birds, and some like Wild beasts, according to the Art and cunning of the Workman; and these for the most part are seasoned with Vinegar, Oyl, and a little Pepper. A World of other Sallets there are, which time and experience may bring to our House-wives eye, but the composition of them, and the serving of them, differeth nothing from these already rehearsed.

Of Fricases
and Quelque-
choses.

Now to proceed to your Fricases, or Quelquechoses, which are dishes of many compositions, and ingredients, as Flesh, Fish, Eggs, Herbs, and many other things, all being prepared and made ready in a Frying-pan, they are likewise of two sorts, simple and compound.

Of simple
Fricases.

Your simple Fricases are Eggs and Collops fried, whether the

the Collops be of Bacon, Ling, Beef, or young Pork, the frying whereof is so ordinary, that it needeth not any relation, or the frying of any Flesh, or Fish simple of it self with Butter or sweet Oyl.

To have the best Collops and Eggs, you shall take the whitest Best Collops and youngest Bacon, and cutting away the sword, cut the Collops and Eggs. into thin slices, lay them in a dish, and put hot water unto them, and so let them stand an hour or two, for that will take away the extream saltness; then drain away the water clean, and put them in a dry pewter dish, and lay them one by one, and set them before the heat of the fire so as they may toast; and turn them so, as they may toast sufficiently thorow & thorow, which done, take your Eggs and break them into a dish, and put a spoonful of Vinegar unto them: then set a clean Skillet with fair water on the fire, and as soon as the water boyleth, put in the Eggs, and let them take a boyl or two; then with a spoon try if they be hard enough, and then take them up and trim them, & dry them, and then dishing up the Collops, lay the Eggs upon them, and so serve them up: and in this sort you may poach Eggs when you please, for it is the best and most wholesome.

Now the compound Fricasées are those which consist of many Of the com- things, as Tanfies, Fritters, Pancakes, and any pound Frica- ses. whatsoever, being things of great Request and Estimation in *France, Spain, and Italy*, and the most curious Nations.

First, then for making the best Tanfie, you shall take a cer- To make the tain number of Eggs, according to the bigness of your Frying- best Tanfies. pan, and break them into a dish, abating ever the white of every third Egge: then with a spoon, you shall cleanse away the little white Chicken knots, which stick unto the yelks; then with a little Cream beat them exceedingly together: then take of green Wheat blades, Violet leaves, Strawberry leaves, Spinage, and Succory, of each a like quantity, and a few Walnut Tree buds; chop and beat all these very well, and then strain out the juice, and mixing it with a little more Cream, put it to the Eggs, and stir all well together; then put in a few Crums of bread, fine grated.

grated bread, Cinnamon, Nutmeg, and Salt; then put some sweet Butter into the Frying-pan, and so soon as it is dissolved or melted, put in the Tansy, and fry it brown without burning, and with a dish turn it in the pan as occasion shall serve; then serve it up, having strewed good store of Sugar upon it, for to put in Sugar before, will make it heavy: Some use to put of the herb Tansy into it, but the Walnut-Tree buds do give the better taste or relish, and therefore when you please for to use the one, do not use the other.

The best Fritters.

To make the best Fritters, take a pint of Cream and warm it, then take eight Eggs, only abate four of the Whites, and beat them well in a dish, and so mix them with the Cream; then put in a little Cloves, Mace, Nutmeg and Saffron, and stir them well together: then put in two-spoonfuls of the best Ale barm, and a little Salt, and stir it again, then make it thick according unto your pleasure with Wheat flower; which done, set it within the air of the fire, that it may rise and swell; which when it doth, you shall beat it in once or twice; then put into it a penny pot of Sack: All this being done, you shall take a pound or two of very sweet seam, and put it into a pan, and set it over the fire, and when it is moulten, and begins to bubble, you shall take the Fritter-batter, and setting it by you, put thick slices of well pared Apples into the Batter, and then taking the Apples and Batter out together with a spoon, put it into the boiling seam, and boyl your Fritters crisp and brown: And when you find the strength of your seam consume or decay, you shall renew it with more seam: and of all sorts of seam, that which is made of the Beef-suet is the best and strongest: when your Fritters are made, strew good store of Sugar and Cinnamon upon them, being fair dight, and serve them up.

The best Pancakes.

To make the best Pancakes, take two or three Eggs, and break them into a dish, and beat them well; then adde unto them a pretty quantity of fair running Water, and beat all well together: then put in Cloves, Mace, Cinnamon and Nutmeg, and season it with Salt; which done, make it as thick as you

you think good with fine Wheat-flower, then fry the Cakes as thin as may be with sweet butter, or sweet seam, and make them brown, and so serve them up with Sugar, strewed upon them. There be some which mix Pancakes with new Milk or Cream, but that makes them tough, cloying, and not so crisp, pleasant and savory as running water.

To make the best Veal Toasts, take the Kidney, fat and all, of a loyn of Veal roasted, and shred it as small as is possible; Then take a couple of Eggs and beat them very well; which done, take Spinage, Succory, Violet-leaves, and Marigold-leaves, and beat them, and strain out the juyce, and mix it with the Eggs; then put it to your Veal, and stir it exceedingly well in a dish; then put to good store of Currants clean waht and pickt, Cloves, Mace, Cinnamon, Nutmeg, Sugar, and Salt, and mix them all perfectly well together: then take a manchet and cut it into Toasts, and toste them well before the fire; then with a spoon lay upon the Tost in a good thickness, the Veal, prepared as before-said; which done, put into your Frying-pan good store of sweet butter, and when it is well melted and very hot, put your Toasts into the same with the bread side upward, and the flesh side down-ward; and as soon as you see they are fried brown, lay upon the upper side of the Toasts which are bare, more of the flesh meat, and then turn them, and fry that side brown also; then take them out of the pan, and dish them up, and strew Sugar upon them, and so serve them forth.

Veal Toasts.

There be some Cooks which will do this but upon one side of the Toasts, but to do it on both is much better; if you add Cream it is not amiss.

To make the best Pamperdy, Take a dozen Eggs, and break them, & beat them very well; then put unto them Cloves, Mace, Cinnamon, Nutmeg & good store of Sugar, with as much Salt as shall season it: then take a Manchet, and cut it into thick slices like Toasts; which done, take your Frying-pan, and put into it good store of sweet butter, and being melted, lay in your slices of bread, then pour upon them one half of your Eggs, then when it is fried, with a dish turn your slices of bread upward, and then

To make the best Pamperdy.

pour on them the other half of your Eggs, and so turn them till both sides be brown; then dish it up, and serve it with Sugar strewed upon it.

To make any
Quelquechose.

To make a *Quelquechose*, which is a mixture of many things together; take the Eggs and break them, and do away one half of the Whites, and after they are beaten, put them to a good quantity of sweet Cream, Currants, Cinnamon, Cloves, Mace, Salt, and a little Ginger, Spinage, Endive, and Mary-gold flowers grossly chopt, and beat them all very well together; then take Pigs Pettitoes sliced and grossly chopt, mix them with the Eggs, and with your hand stir them exceeding well together; then put in sweet Butter in your Frying-pan, and being melted, put in all the rest, and fry it brown without burning, ever and anon turning it, till it be fried enough; then dish it upon a flat plate, and so serve it forth. Only here is to be observed, that your Pettitoes must be very well boyled before you put them in to the Fry-case.

Additions to
the House-
wife.

And in this manner as you make this *Quelquechose*, so you may make any other, whether it be of flesh, small Birds, sweet Roots, Oysters, Muscles, Cockles, Giblets, Lemmons, Oranges, or any Fruit, Pulse, or other Sallet herb whatsoever; of which to speak severally, were a Labour infinite, because they vary with mens opinion. Only the composition and work is no other than this before prescribed: and who can do these, need no further instruction for the rest. And thus much for *Sallets* and *Fricases*.

Cookery,
To make Frit-
ters.

To make Fritters another way; Take Flower, Milk, Barm, grated bread, small Raisins, Cinnamon, Sugar, Cloves, Mace, Pepper, Saffron, and Salt; stir all these together very well with a strong spoon or small ladle, then let it stand more than a quarter of an hour, that it may rise; then heat it in again, and thus let it rise, and be beat in twice or thrice at least; then take it and bake them in sweet and strong seame, as hath been before shewed, and when they are served up to the Table, see you strew upon them good store of Sugar, Cinnamon and Ginger.

To make the
best white
Puddings.

Take a pint of the best, thickest and sweetest Cream, and boyt it, then whilst it is hot, put thereunto a good quantity of great
sweet.

sweet Oatmeal, Grots very sweet, and clean pickt, and formerly steep in milk twelve hours at least, and let it soak in this Cream another night; then put thereto at least eight yolks of Eggs, a little Pepper, Cloves, Mace, Saffron, Currants, Dates, Sugar, Salt, and great store of Swines Suet, or for want thereof grant store of Beef Suet, and then fill it up in the formes according unto the order of good House-wifery; and then boyl them on a soft and gentle fire, and as they swell, prick them with a great Pin, or small Awl, to keep them that they burst not; and when you serve them to the Table, (*which must not be untill they be a day old*) first boyl them a little, then take them out, and toast them brown before the fire, and so serve them, trimming the edge of the dish either with Salt or Sugar.

Take the Liver of a fat Hogg, and parboyl it; then shred it small, and after beat it in a Mortar very fine; then mix it with the thickest and sweetest Cream, and strain it very well through an ordinary strainer: then put thereto six yolks of Eggs and two Whites, and the grated crums of (near hand) a penny White loaf with good store of Currants, Dates, Cloves, Mace, Sugar, Saffron, Salt, and the best Swines-suet, or Beef-suet, but Beef-suet is the more wholesome, and less loosning; then after it hath stood a while, fill it into the Farms, and boyl them as before shewed: and when you serve them unto the Table, first boyl them a little, then lay them on a Gridiron over the coals, and broyl them gently, but scorch them not, nor in any wise break their skins, which is to be prevented by oft turning and tossing them on the Gridiron, and keeping a slow fire.

Take the Yolks and Whites of a dozen or fourteen Eggs, and having beat them very well, put unto them the fine powder of Cloves, Mace, Nutmegs, Sugar, Cinnamon, Saffron, and Salt; then take the quantity of two loaves of white grated Bread, Dates very small shred, and great store of Currants, with good plenty either of Sheeps, Hogs or Beef suet beaten and cut small: then when all is mixt, and stirred well together, and hath stood a while to settle, then fill it into the Farms, as hath been before

shewed, and in like manner boyl them, cook them, and serve them to the Table.

Rice Puddings.

Take half a pound of Rice, and steep it in new milk a whole night, and in the morning drain it, and let the milk drop away, and take a quart of the best, sweetest, and thickest Cream, and put the Rice into it and boyl it a little; then set it to cool an hour or two, and after put in the Yelks of half a dozen Eggs, a little Pepper, Cloves, Mace, Currants, Dates, Sugar and Salt; and having mixt them well together, put in great store of Beef suet well beaten, and small shred, and so put it into the farms, and boyl them as before shewed, and serve them after a day old.

Another of Liver.

Take the best Hogs Liver you can get, and boyl it extreemly, till it be as hard as a stone, then lay it to cool, and being cold, upon a bread-grater grate it all to powder; then sift it through a fine meal-sieve, and put to it the crums of (at least) two penny loaves of white bread, and boyl all in the thickest and sweetest Cream you have, till it be very thick; then let it cool, and put to it the yelks of half a dozen Eggs, a little Pepper, Cloves, Mace, Currants, Dates small shred, Cinnamon, Ginger a little Nutmeg, good store of Sugar, a little Saffron, Salt, and of Beef and Swines suet great plenty, then fill it into the Farms, and boyl them as before shewed.

Puddings of a Calves Mugget.

Take a Calves Mugget, clean and sweet drest, and boyl it well, then shred it as small as is possible, then take of Strawberry leaves, of Endive, Spinage, Succory, and Sarnel, of each a pretty quantity, and chop them as small as is possible, and then mix them with the Mugget; then take the yelks of half a dozen Eggs, and three whites, and beat them into it also; and if you find it is too stiff, then make it thinner with a little Cream warmed on the fire, then put in, a little Pepper, Cloves, Mace, Cinnamon, Ginger, Sugar, Currants, Dates, and Salt, and work all together, with casting in little pieces of sweet Butter one after another, till it have received good store of Butter, then put it up in the Calves-bag, Sheeps-bag, or Hogs-bag, and then boyl it well, and so serve it up.

Take

Take the blood of a Hogg whilst it is warm, and steep it in a Pudding. quart or more of great Oat-meal grotes, and at the end of three daies with your hands take the Grotes out of the blood, and drain them clean; then put to those Grotes more then a quart of the best Cream warm'd on the fire; then take mother of Thyme, Parsley, Spinage, Succory, Endive, Sorrel and Strawberry leaves, of each a few chopt exceeding small, and mix them with the Grotes, and also a little Fennel-seed finely beaten, then adde a little Pepper, Cloves and Mace, Salt, and great store of suet finely shred, and well beaten; then therewith fill your Forms, and boyl them, as hath been before described.

Take the largest of your Chines of Pork, and that which is called a Liff, and first with your Knife cut the lean thereof into thin slices, and then shred small those slices, and then spread it over the bottom of a dish or wooden platter: then take the fat of the Chine and the liff, and cut it in the very self-same manner, and spread it upon the lean, and then cut more lean, and spread it upon the fat, and thus do one lean upon another, till all the Pork be shred, observing to begin and end with the lean: then with your sharp Knife scotch it through & through divers waies, and mix it all well together: then take good store of Sage, and shred it exceeding small, and mix it with the flesh: then give it a good season of Pepper and Salt, then take the forms made as long as is possible, and not cut in pieces as for puddings, and first blow them well to make the meat slip, and then fill them: which done, with threds divide them into several links as you please; then hang them up in the corner of some Chimny clean kept, where they may take air of the fire, and let them dry there at least four daies before any be eaten; and when they are served up, let them be either fryed or broyled on the Gridiron, or else roasted about a Capon.

It resteth now that we speak of boyl'd meats and broths, which forasmuch as our *House-Wife* is intended to be general, one that can as well feed the poor as the rich, we first begin with those ordinary wholesome boyl'd meats which are of use in every good mans house; therefore to make the best ordinary Pottage, you shall

shall take a rack of mutton cut into pieces, or a leg of mutton cut into pieces; for this meat, and these joynts are the best, although any other joynt or any fresh Beef will likewise make good Pottage; and having washt your meat well, put it into a clean pot with fair water, and set it on the fire, then take Violet leaves, Succory, Strawberry leaves, Spinage, Langdebeef, Marygold flowers, Scallions, and a little Parsley, and chop them very small together; then take half so much Oat-meal well beaten as there is herbs, and mix it with the herbs, and chop all very well together, then when the pot is ready to boyl, scum it very well, and then put in your Herbs, and so let it boyl with a quick fire, stirring the meat oft in the pot, till the meat be boyl'd enough, and that the herbs and water are mixt together without any separation, which will be after the consumption of more than a third part: Then season them with salt, and serve them up with the meat, either with hippets or without.

Pottage without
sight of
herbs.

Some desire to have their Pottage green, yet no herbs to be seen, in this case you must take your Herbs and Oatmeal, and after it is chopt put it into a stone mortar or bowl, and with a wooden pestle beat it exceedingly, then with some of the warm liquor in the pot strain it as hard as may be, and so put it in and boyl it.

Pottage without
herbs.

Others desire to have pottage without any herbs at all, and then you must only take Oat-meal beaten, and good store of Onions, and put them in and boyl them together; and thus doing you must take a greater quantity of Oatmeal then before.

Pottage with
herbs.

If you will make Pottage of the best and daintiest kind, you shall take Mutton, Veal or Kid, and having broken the bones, but not cut the flesh in pieces, and wash it, put it into a pot with fair water; after it is ready to boyl, and thoroughly scum'd, you shall put in a good handful or two of small Oatmeal: and then take whole Lettuce of the best and most inward leaves, whole Spinage, Endive, Succory, and whole leaves of Cole-flowers, or the inward part of white Cabbage, with two or three slic't Onions, and put all into the pot, and boyl them well together till the meat be enough, and the Herbs so soft as may be, and stir them oft well together; and then season it with salt, and as much

Verjuice

Verjuyce as will onely turn the taste of the Pottage; and to serve them up, covering the meat with the whole Herbs, and adorning the dish with sippets.

To make ordinary stew'd broth, you shall take a neck of Veal, or a legg, or marrow-bone of Beef, or a Pullet, or Mutton, and after the meat is washt, put it into a pot with fair water, and being ready to boyl, scum it well; then you shall take a couple of Manchets, and pairing away the crust, cut it into thick slices, and lay them in a dish, and cover them with hot broth out of the pot; when they are steeped, put them and some of the broth into a strainer and strain it, and then put it into a pot: then take half a pound of Prunes, half a pound of Raisins, and a quarter of a pound of Currants clean pickt and washt, with a little whole Mace, and two or three bruised Cloves, and put them into the pot, and stir all well together, and so let them boyl till the meat be enough, then if you will alter the colour of the broth, put in a little Turnsoyl or red Sanders, and so serve it upon sippets, and the fruit uppermost.

To make ordinary stew'd broth.

To make an excellent boyled meat, take four pieces of a rack of mutton, and wash them clean, and put them into a pot well scoured with fair water; then take a good quantity of Wine and Verjuyce, and put it into it; then slice a handful of Onions, and put them in also, and so let them boyl a good while, then take a piece of sweet Butter with Ginger and Salt, and put it to also, and then make the broth thick with grated bread, and so serve it forth with sippets.

A fine boyled meat.

To boyl a Mallard curiously, take the Mallard when it is fair dressed, washed and trust, and put it on a spit and roast it till you get the gravy out of it; then take it from the spit and boyl it, then take the best of the broth into a pipkin, and the gravy which you saved, with a piece of sweet Butter, and Currants, Vinegar, Pepper, and grated bread: Thus boyl all these together, and when the Mallard is boyled sufficiently, lay it on a dish with sippets, and the broth upon it, and so serve it forth.

To boyl a Mallard.

To make an excellent *Oleporride*, which is the only principal dish

dish of boyled meat which is esteemed in all *Spain*; you shall take a very large vessel Pot or Kettle, and filling it with water, you shall set it on the fire, and first put in good thick gobbets of well fed Beef, and being ready to boyl, scum your pot; when the Beef is half boyled, you shall put in Potato-roots, Turneps and Carrets; also like gobbets of the best Mutton, and the best Pork: after they have boyled a while, you shall put in the like gobbets of Venison Red and Fallow if you have them; then the like gobbets of Veal, Kid, and Lamb; a little space after these, the fore-parts of a fat Pigge, and a cramb'd Pullet; then put in Spinage, Endive, Succory, Marygold leaves, and flowers, Lettuce, Violet leaves, Strawberry leaves, Bugloss and Scallions all whole and unchopt, then when they have boyled a while, put in a Partridge and a Chicken chopt in pieces, with Quails, Rayls, Black Birds, Larks, Sparrows, and other small Birds; all being well and tenderly boyled, season up the broth with good store of Sugar, Cloves, Mace, Cinnamon, Ginger and Nutmeg, mixt together in a good quantity of Verjuyce and Salt, and so stir up the pot well from the bottom: then dish it up upon great Chargers or long *Spanish* dishes, laying store of lippets in the bottom: then cover the meat all over with Prunes, Raisins, Currants, and blancht Almonds, boyled in a thing by themselves; then cover the fruit and the whole boyled herbs, and the herbs with slices of Oranges and Lemmons, and lay the roots round about the sides of the dish, and strew good store of Sugar all over, and so serve it forth.

To make the
best white
broth,

To make the best white broth, whether it be with Veal, Capon, Chickens, or any other Fowl or Fish; First boyl the flesh or fish by it self, then take the value of a quart of strong Mutton broth, or sad Kid broth, and put it into a pipkin by it self, and put into a bunch of Thyme, Marjerom, Spinage, and Endive bound together; then when it seethes, put in a pretty quantity of Beef marrow, and the marrow of Mutton, with some whole Mace, and a few bruised Cloves: then put in a pint of White Wine, with a few whole slices of Ginger: after they have boyled a while together, take blancht Almonds, and having beaten them together in a mortar with some of the broth, strain them
and

put it in also: then in another Pipkin boyl Currants Prunes Raisins and whole Cinnamon in Verjuyce and Sugar with a few sliced Dates, and boyl them till the Verjuyce be most part consumed, or at least come to syrup; then drain the fruit from the syrup, and if you see it be high coloured, make it white with sweet Cream warmed, and so mixe it with your Wine, broth: then take out the Capon or the other flesh or fish, and dish it up dry in a dish; then pour the broth upon it, and lay the fruit on the top of the meat, and adorn the side of the dish with very dainty sippets, First Oranges, Lemons and Sugar, and so serve it forth to the Table.

To boyl any wild Fowl, *Mallard, Teal, Widgeon*, or such like: First boyl the Fowl by it self, then take a quart of strong Mutton broth, and put it into a Pipkin and boyl it; then put unto it good store of sliced Onions, a bunch of sweet pot herbs, and a lump of sweet butter, after it hath boyled well, season it with Verjuyce, Salt and Sugar, and a little whole Pepper; which done, take up your fowl, and break it according to the fashion of Carving, and stick a few Cloves about it; then put it into the broth with Onions, and there let it take a boyl or two, and so serve it and the broth forth upon the sippets: Some use to thicken it with toasts of bread steeped and strained; but that is as pleases the Cook.

To boyl any
wild Fowl.

To boyl a legg of Mutton, or any other Joynt of meat whatsoever; first after you have washt it clean, parboyl it a little, then spit it and give it half a dozen turnes before the fire, then draw it when it begins to drop, and press it between two dishes, and save the gravie; then slash it with your Knife, and give it half a dozen turnes more, and then presse it again; and thus do as often as you can force any moisture to come from it; then mixe Mutton Broth, White Wine, and Verjuyce together, boyl the Mutton therein till it be tender, and that most part of the liquor is clean consumed; then having all that while kept the gravy that you took from the Mutton, stewing gently upon a Chafin-dish and coals, you shall adde unto it good store of Salt, Sugar, Cinnamon and Ginger with some Lemon sliced and a little of an Orange peel with a few fine white bread crumbs: then taking up the Mutton, put the remainder of the broth on

To boyl a leg
of Mutton.

and put in likewise the gravy, and then serve it up with sippets, lay the Lemon slices uppermost, and trimming the dish about with Sugar.

If you will boyl Chickens, young Turkeys, Pea-hens, or House fowl daintily; you shall, after you have trimmed them, drawn them, trust them, and washt them, fill their bellies as full of Parsley as they can hold; then boyl them with salt and water only till they be enough: then take a dish and put into it Verjuice and Butter, and Salt, and then when the butter is melted, take the Parsly out of the Chickens belly, and mince it very small, and then put to it the Verjuice and Butter, and stirre it well together; then lay in the Chickens, and trim the dish with sippets and so serve it forth.

A broth for any fresh Fish.

If you will make broth with any fresh Fish whatsoever, whether it be Pike, Bream, Carp, Eel, Barbel, or such-like, you shall boyl water, Verjuice and Salt together with a handful of sliced Onions, then you shall thicken it with two or three spoonfulls of Ale-barm; then put in a good quantity of whole Barberies, both branches and other, as also pretty store of Currants; then when it is boyled enough, Dish up your Fish and pour your broth unto it, laying your fruit and Onions uppermost. Some to this broth will put Prunes and Dates sliced, but it is according to the fancy of the Cook, or the Will of the Householder.

Additions to boyl meat.

Thus I have from these few Presidents shewed you the true Art and making of all sorts of boyled meats & broths, and though men may coyn strange names, and feign strange Arts, yet be assured she that can do these, may make any other whatsoever, altering the taste by the alteration of the compounds as she shall see occasion. And when a broth is too sweet, to sharpen it with verjuice; when too tart, to sweeten it with Sugar; when flat and watery, to quicken it with Oranges and Lemons; and when too bitter, to make it pleasant with Herbs and Spices.

A Mallard smoared, or a Hare, or old Cony.

Take a Mallard when it is clean dressed, washed and trust, and boyl it in water, till it be tender and piced; then take it up and put it into a Pipkin with the neck downward, and the neck upward, standing as it were upright: then fill the Pipkin full

full with that water in which the Mallard was parboyled, and fill up the other half with white Wine; then peel and slice thin a good quantity of Onions, and put them in with whole fine herbs, according to the time of the year, as Lettuce, Strawberry leaves, Violet leaves, Vine leaves, Spinage, Endive, Succory, and such like, which have no bitter or hard taste, and a pretty quantity of Currants and Dates sliced; then cover it close, and set it on a gentle fire, and let it stew, and smoor till the Herbs and Onions be soft, and the Mallard enough; then take out the Mallard, and Carve it as if it were to go to the Table: then to the Broth put a good lump of Butter, Sugar, Cinnamon; and if it be in Summer, so many Gooseberries as will give it a sharp taste; but in the Winter, as much Wine Vinegar; then heat it on the fire, and stir all well together: then lay the Mallard in a Dish with sippets, and pour all this broth upon it, then trim the edge of the dish with Sugar, and so serve it up. And in this manner you may also smoor the hinder parts of a Hare, or a whole old Cony, being trust up close together.

After your Pike is drest and opened in the back, and laid flat, as if it were to fry, then lay it in a large dish for the purpose, able to receive it; then put as much White Wine to it as will cover it all over; then set it on a chafin-dish and Coals to boyl very gently, and if any scum arise, take it away; then put to it Currants, Sugar, Cinnamon, Barberries, and as much Prunes as will serve to garnish the dish, then cover it close with another dish, and let it stew till the fruit be soft, and the Pike enough; then put to it a good lump of sweet Butter; then with a fine Summer take up the fish, and lay it in a clean dish with sippets, then take a couple of yolks of eggs, the film taken away, and beat them well together with a spoonful or two of Cream, and as soon as the Pike is taken out put it into the broth and stink exceedingly to keep it from curding; then pour the broth upon the Pike, and trim the sides of the dish with Sugar, Prunes, and Barberries, slices of Oranges or Lemons, and so serve it up. And thus may you also stew Roches, Gurnets, or almost any Sea fish or fresh fish.

Take a Lambs head and Purtenance, clean wash and pickt,

To stew a
Lambs head &
it Purtenance.

it clean, then put Currants and a few sliced Dates, and a bunch of the best farcing herbs tyed up together, and so let it boyl well till the meat be enough; then take up the Lambs head and Purtenance, and put it into a clean dish with sippets; then put in a good lump of Butter, and beat the yelks of two eggs with a little Cream, and put it to the Broth with Sugar, Cinnamon, and a Spoonfull or two of Verjuice and whole Mace, and as many Prunes as will garnish a dish, which should be put in when it is but half boyled, and so pour it upon the Lambs head and Purtenance, and adorn the sides of the dish with Sugar, Prunes, Barberries, Oranges and Lemons; and in no case forget to season it well with Salt, and so serve it up.

A Breast of
Mutton stew'd.

Take a very good breast of Mutton chopt into sundry large pieces, and when it is clean washt, put it into a pipkin with fair water, and set it on the fire to boyl; then scum it very well, then put in of the finest Parsnips cut into large pieces as long as ones hand, and clean washt and scrap't; then good store of the best Onions, and all manner of sweet pleasant Pot-herbs and Lettuce, all grossly chopt, and good store of Pepper and Salt, and then cover it, and let it stew till the mutton be enough, then take up the mutton, and lay it in a clean dish with sippets, and to the broth put a little wine vinegar, and so pour it on the mutton with the Parsnips whole, and adorn the sides of the dish with Sugar, and so serve it up. And as you do with the breast, so you may do with any other Joynt of Mutton.

To stew a
Neats foot.

Take a Neats foot that is very well boyl'd (for the tenderer it is, the better it is) and cleave it in two, and with a clean cloth dry it well from the Soufe-drink, then lay it in a deep earthen platter and cover it with Verjuice, then set it on a Chafing-dish and coals, and put to it a few Currants &c as many Prunes as will garnish the dish, then cover it and let it boyl well, many times stirring it up with your Knife, for fear it stick to the bottome of the dish; then when it is sufficiently stewed, which will appear by the tenderness of the meat and softness of the fruit; then put in a good lump of butter, great store of Sugar and Cinnamon, and let it boyl a little after: then put it all together into a clean dish with sippets, and adorn the sides of the dish with Sugar and Prunes, and so serve it up.

To

To proceed then to Roast meats, it is to be understood, that in the general knowledge thereof are to be observed these few Rules : First the clean keeping and scouring of the spits and coblions ; Next, the neat picking and washing of meat, before it be spitted, then the spitting and broaching of meat, which must be done so strongly and firmly, that the meat may by no means either shrink from the spit, or else turn about the spit ; and yet ever to observe, that the spit do not go through any principall part of the meat, but such as is of least account and estimation, and if it be birds or fowl which you spit, then to let the spit go through the hollow of the body of the fowl, and so fasten it with pricks or skewers under the wings about the thigh of the fowl, and at the feet or Rump, according to your manner of trussing and dressing them.

Of Roast meats.

Observations in roast meats.

Spitting of roast meats.

Then to know the Temperatures of fires for every meat, and which have a slow fire, and yet a good one, taking leisure in roasting, as Chines of Beef, Swans, Turkeys, Peacocks, Bustards, and generally any great large Fowl, or any other Joynts of Mutton, Veal, Duck, Kid, Lamb, or such like : whether it be Venison red or Fallow ; which indeed would lye long at the fire, and seak well in the roasting, and which would have a quick and sharp fire without scorching : as Pigs, Pullets, Pheasants, Partridges, Quails, and all sorts of middle lized, or less fowl, and all small birds, or compound roast meats, as Olives of Veal, Harlets, a poult of butter roasted, or puddings simple of themselves, and many other such like, which indeed would be suddenly & quickly dispatcht, because it is intended in Cookery, that one of these dishes must be made ready whilst the other is in eating. Then to know the complexions of meats, as which must be pale and white roasted, and yet thoroughly roasted, as Mutton, Lamb, Kid, Capon, Pullet, Pheasant, Partridge, Veal, Quail, and all sorts of middle and small land or water-Fowl, and all small Birds, which must be so brown roasted, as Beef, Venison, Pork, Swan, Geese, Pigs, Crane, Bustards, or any large Fowl, or other thing whose skin is black.

Temperature of fires.

The complexion of meat.

Then to know the best baskings for meat, which is sweet Butter, Sweet Oyl, Barrel Butter, or fine rendred up seam, with Cinnamon, Cloves and Mace. There be some that will baste onely

The best baskings of Meats.

The best
dredging.

To know when
meat is e-
nough.

only with Water and Salt, and nothing else : yet it is but opinion, and that must be the Worlds Matter alwayes.

Then the best dredging, which is either fine white bread crums well grated ; or else a little very white meal, and the crums very well mixt together.

Lastly to know when meat is roasted enough; for as too much rawness is unwholsome, so too much dryness is not nourishing. Therefore to know when it is in the perfect height, and is neither too moist nor too dry, you shall observe these signs : First, in your large Joynts of meat, when the steam or smoak of the meat ascendeth either upright, or else goeth from the fire, when it becometh a little to shrink from the spit, or when the gravy which droppeth from it is clear without bloodiness, then is the meat enough.

If it be a Pigge, when the eyes are fallen out, and the body leaveth Piping: for the first is when it is half roasted, and would be singed to make the coat rise, and crackle; and the later when it is full enough, and would be drawn ; or if it be any kind of Fowl you roast, when the thighs are tender, or the hinder parts of the pinions at the setting on of the wings, are without blood, then be sure that your meat is fully enough roasted : yet for a better and more certain assuredness, you may thrust your Knife into the thickest parts of the meat, and draw it out again, and if it bring out white gravy without any bloodiness, then assuredly it is enough, and may be drawn with all speed convenient, after it hath been well basted with butter not formerly melted, then dredging as aforesaid, then basted over the dredging and so suffered to take two or three turns, to make crispe the dredging : Then dish it in a fair dish with salt sprinkled over it, and so serve it forth. Thus you see the general form of roasting, all kind of meats : Therefore now I will return to some particular dishes, together with their severall Sauces.

Roasting of
Mutton with
Oysters.

If you will roast Mutton with Oysters, take a shoulder alone or a legg, and after it is washt, parboyl it a little; then take the great Oysters, and having opened them into a dish, drain the gravy clean from them twice or thrice, then parboyl them a little; then take Spinage, Endive, Succory, Strawberry leaves, Violet leaves and a little Parsly, with some Scallions; chop these very

(small)

small together, then take your Oysters very dry, drain'd and mix them with an half part of these herbs; then take your meat, and with these Oysters and herbs farce or stop it, leaving no place empty, then spit it and roast it, and whilst it is in roasting, take good store of Verjuice and Butter, and Salt, and set it in a dish on a chafing dish and coals; and when it begins to boyl, put in the remainder of your herbs without, Oysters, and a good quantity of Currants, with Cinnamon, and the yolks of a couple of eggs. And after they are well boyled and stirred together, season it up according to your taste with Sugar; then put in a few Lemon slices, the meat being enough, draw it, and lay it upon this sauce removed into a clean dish, the edge thereof being trimmed about with Sugar, and so serve it forth.

To roast a Leg of Mutton after an *Outlandish* fashion, you shall take it after it is wash'd, and cut off all the flesh from the bone, leaving only the outmost skin intirely whole, and fast to the bone; then take thick Cream and the yolks of eggs, and beat them exceedingly well together, then put to Cinnamon, Mace, and a little Nutmeg with Salt; then take bread crumbs finely grated and searst with good store of Currants, and as you mix them with the Cream, put in Sugar and so make it into a good stiffness. Now if you would have it look green, put in the juyce of sweet herbs, as Spinage, Violet leaves, Endive, &c. If you would have it yellow, then put in a little Saffron strained, and with this fill up the skin of your leg of Mutton in the same shape and form that it was before, and tick the out-side of the skin, thick with Clives, and so roast it thoroughly, and baste it very well, then after it is dredg'd, serve it up as a leg of Mutton with this Pudding; for indeed it is no other: you may stop any other Joynt of meat, as breast or loyn, on the belly of any fowl boyled or roast, or Rabbet, or any meat else which hath skin or emptiness. If into this Pudding, also you beat the inward pith of an Oxes back, it is both good in taste, and excellent sovereign for any disease, ach, or flux in the reins, whatsoever.

To roast a Jigget of Mutton, which is the leggs splatted and half part of the loyn together, you shall after it is wash'd, stop it with Cloves, so spit it and lay it to the fire, and tend it well with basting; then you shall take Mergar, Butter and Currants, and

To roast a leg of Mutton otherwise.

To roast a Jigget of Mutton.

To roast a Jigget of Mutton.

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set them on a fire in a dish or pipkin; then when it boyles you shall put in sweet herbs finely chopt, with the yelks of a couple of eggs, and so let them boyl together: then the meat being half roasted, you shall pare off some part of the leanest and brown, then shred it very small, and put it into the pipkin also; then season it up with Sugar, Cinnamon, Ginger and Salt, and so put it into a clean dish, then draw the Jigget of Mutton and lay it on the sawce, and throw salt on the top and so serve it up.

To roast O-laves of Veal.

You shall take a legg of Veal, and cut the flesh from the bones, and cut it out into thin long slices; then take sweet herbs and the white part of Scallions, and chop them well together with the yelks of eggs, then roule it up within the slices of Veal, and so spit them and roast them; then boyl Verjuice, Butter, Sugar, Cinnamon, Currants, and sweet herbs together, and being seasoned with a little salt, serve the Olives up upon the sauce with salt cast over them.

To roast a Pig.

To roast a Pig curiously, you shall not scald it, but draw it with the hair on, then having washed it, spit it and lay it to the fire, so as it may not scorch, then being a quarter roasted, and the skin blistered from the flesh, with your hand pull away the hair and skin, and leave all the fat and flesh perfectly bare; then with your Knife scotch all the flesh down to the bones, then baste it exceedingly with butter and Cream, being no more but warm: then dredge it with fine bread crumbs, Currants, Sugar, and Salt mixt together; and thus apply dredging upon basting, and basting upon dredging, till you have covered all the flesh a full inch deep; Then the meat being fully roasted, draw it, and serve it up whole.

To roast a pound of Butter well.

To roast a pound of Butter curiously and well, you shall take a pound of sweet Butter, & beat it stiff with Sugar and the yelks of Eggs, then clap it round with about a spinn, and lay it before a soft fire, & presently dredge it with the dredging before appointed for the Pig; then as it warmeth or melteth, so apply it with dredging till the Butter be overcome, and no more will melt to fall from it; then roast it brown, and so draw it, and serve it out, the dish being as neatly trim'd with Sugar as may be.

To roast a Pudding upon a spit, you shall mixe the Pudding

before spoken of in the leg of Mutton, neither omitting herbs or saffron, and put to a little sweet butter and mix it very stiff, then fold it about the spit, and have ready in another dish some of the same mixture well seasoned, but a great deal thinner, & no butter at all in it; and when the pudding doth begin to roast, & that the butter appears, then with a spoon cover it all over with the thinner mixture, and so let it roast: then if you see no more butter appear, then baste it as you did the Pig, and lay more of the mixture on, and so continue till all be spent; and then roast it brown and so serve it up.

To roast a pudding on a spit.

If you will Roast a Chine of Beef, a loyn of Mutton, a Capon, and a Lark, all at one instant, and at one fire, and have all ready together and none burnt, you shall first take your Chine of Beef and parboyl it more than half through: Then first take your Capon, being large and fat, and spit it next the hand of the turner, with the legs from the fire, then spit the Chine of Beef, then the Lark, and lastly the loyn of Mutton, and place the Lark so as it may be covered over with the Beef and the fat part of the Loyn of Mutton, without any part disclosed; then baste your Capon & your loyn of Mutton with cold water & salt, the Chine of beef with boyling Lard, then when you see the beef is almost enough, which you shall hasten by scotching and opening of it, then with a clean cloth you shall wipe the Mutton and Capon all over, & then baste it with sweet butter till all be enough roasted: then with your knife lay the Lark open, which by this time will be stewed between the beef and mutton, and basting it also with dredge altogether, draw them and serve them up.

To roast a Chine of beef, Loyn of Mutton, Lark and Capon at one fire, and at one instant.

If you will Roast any Venison, after you have washt it, & cleaned all the blood from it, you shall stick it with cloves all over on the outside; & if it be leane, you shall lard it either with mutton lard, or pork lard: but mutton is the best; then spit it & roast it by a soaking fire, then take vinegar, bread crumbs, and some of the gravy which comes from the venison, and boyl them well in a dish: then season it with sugar, cinnamon, ginger & salt, & serve the venison forth upon the sauce when it is roasted enough.

To roast Venison.

If you will Roast a piece of fresh Sturgeon, which is a dainty dish, you shall stop it with Cloves, then spit it, and let it Roast at great leisure, plying it continually with basting, which will

take away the hardness : then when it is enough you shall draw it and serve it upon Venison sawce, with salt only thrown upon it.

The roasting of all sorts of meats differeth nothing but in the fire, speed and leisure as is aforesaid, except these compound dishes, of which I have given you sufficient presidents, and by them you may perform any work whatsoever : but for the ordering, preparing, and trulling your meat for the spit or Table, in that there is much difference : for in all joynts of meat except a shoulder of Mutton, you shall crush and break the joynts well ; from Pigs and Rabbits you shall cut off the feet before you spit them, and the heads when you serve them to the Table ; and the Pig you shall chine and divide into two parts : Capons, Pheasants, Chickens, and Turkeys you shall roast with the Pinions folded up, and the legs extended : Hens, Stock-doves, & House-doves, you shall Roast with the Pinions folded, and the legs cut off by the knees and thrust into the bodies : Quails, Partridges, and all sorts of small Birds shall have their Pinions cut away, and the legs extended : all sorts of Water fowl shall have their Pinions cut away, and their legs turned backwards : Wood-cocks, Snipes and Stint shall be Roasted with their Heads and Necks on, and their legs thrust into their bodies, and shoulders, and Bitterns shall have no necks but their heads only.

To roast a
Cows Udder.

Take a Cows Udder, and first boyl it well : then stick it thick all over with Cloves : then when it is cold spit it, and lay it on the fire, and apply it very well with basting of sweet butter, and when it is sufficiently roasted and brown, then dredge it, and draw it from the fire, take vinegar and butter, and put it on a chafing dish and coals ; and boyl it with White bread crum, till it be thick : then put to it good store of Sugar & Cinnamon, and putting it into a clean dish, lay the Cows Udder therein, and trim the sides of the dish with Sugar, and so serve it up.

To roast a Fil-
let of Veal.

Take an excellent good leg of Veal, and cut the thick part thereof, a handfull and more from the Knuckle : then take the thick part (which is the fillet) and force it in every part all over with Strawberry leaves, Sorrel, Spinage, Endive, and

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Succory grossely chopt together, and good store of Onions, then lay it to the fire and roast it very sufficiently and brown, casting good store of Salt upon it, and basting it well with sweet butter: then take of the former herbs much finer chopt then they were for farcing, and put them into a Pipkin with Vinegar and clean washt Currants, and boyl them well together, then when the herbs are sufficiently boyled and soft, take the yelks of four very hard boyled Eggs, and shred them very small, and put them into the Pipkin also with Sugar and Cinnamon and some of the gravy which drops from the Veal, and boyl it over again, and then put it into a clean dish, and the lillet being dredged and drawn, lay upon it and trim the side of the dish with Sugar, and so serve it up.

To make an excellent Sauce for a rost Capon, you shall take Onions, and having sliced and peeled them, boyl them in fair water with Pepper, Salt, and a few bread crums; then put unto it a spoonfull or two of claret Wine, the juyce of an Orange, and three or four slices of Lemmon peel: all these shred together, and so pour it upon the Capon being broke up.

To make a sawce for an old Hen or Pullet, take a good quantity of Beer and Salt, and mix them well together with a few fine bread crums, and boyl them on a chafin-dish and coals; then take the yelks of three or four hard Eggs, and being shred small put it to the beer, and boyl it also; then the Hen being almost enough, take three or four spoonfulls of the gravy which comes from her, and put it in also, and boyl all together to an indifferent thicknes: which done, suffer it to boyl no more, but only to keep it warm on the fire, and put into it the juyce of two or three Oranges, and the slices of Lemmon-peels shred small, and the slices of Oranges, having also the upper rind taken away: then the Hen being broke up, take the brains thereof, and shredding them small, put it into the sawce also, and stirring all well together, put it hot into a cleane warme dish, and lay the Henne (broke up) in the same.

The Sawce for Chickens is divers, according to mens tastes: for some will onely have Butter, Verjuyce, and a little

Partly roasted in their bellies mixt together; others will have butter, verjuyce, and Sugar boyl'd together with toasts of bread; & others will have thick sippets with the juyce of sorrel and sugar mixt together.

The best sawce for a Pheasant is water and Onions slic't, Pepper and a little Salt mixt together, and burstewed upon the coals, & then poured upon the Pheasant or Partridge, being broken up, & some will put thereto the juyce or slices of an Orange or Lemon, or both: but it is according to taste, and indeed more proper for Pheasant then Partridge.

Sauce for a Quail, Raile, or any fat big bird, is Claret wine & salt mixt together with the gravy of the bird, and a few fine bread crums well boyled together, and either a Sage leaf, or Bay leaf crustit amongst it, according to mens tastes.

Sauce for Pidgeons.

The best sauce for Pidgeons, Stockdoves, or such like, is Vinegar and butter melted together, and partly roasted in the bellies or Vine leaves roasted and mixed well together.

A general sauce for wild fowl.

The most generall sauce for ordinary wild fowl roasted, as Ducks, Mallard, Widgeon, Teal, Snipe, Sheldrake, Plovers, Pucers, Gulls, and such like, is only Mustard and Vinegar, or Mustard & Verjuyce mixt together; or else an Onion, Water, and Pepper, and some (especially in the Court) use only butter melted, and not with any thing else.

Sauce for green Geese.

The best sauce for green Geese is the juyce of Sorrel and Sugar mixt together with a few scalded Feberries, and served upon sippets; or else the belly of the green Goose fil'd with Feberries and so roasted; and then the same mixt with Verjuyce, Butter, Sugar and Cinnamon, and so served up on sippets.

Sauce for stubble Geese.

The Sawce for a stubble Goose is divers, according to mens minds, for some will take the pap of roasted Apples, and mixing it with vinegar, boyl them together on the fire with some of the gravy of the Goose, and a few barberries and bread crums, and when it is boyled to a good thickness, season it with Sugar and a little Cinnamon, and so serve it up: some will add a Little Mustard and Onions unto it, and some will not roast the apples, but pare them and slice them, and that is the neerer way, but not the better. Others will fill the belly of the Goose full of Onions sliced, and Oatmeal groats, and boyl

ing roasted enough, mix it with the gravie of the Goose, and sweet herbs well boyled together, and seasoned with a little Verjuice.

To make a *Gallantine*, or sauce for a Swan, Bittern, Hern, A *Gallantine*, Crane, or any large Fowl, take the blood of the same Fowl, and Sauce for a thick, put unto it Vinegar a good quantity, with a few fine white bread crums, and so boyl it over again; then being come to a good thickness, season it with Sugar and Cinnamon, so as it may taste pretty and sharp upon the Cinnamon, and then serve it up in saucers as you do Mustard, for this is called a *Chauder* or *Gallantine*, and is a sawce almost for any Fowl whatsoever.

To make sawce for a Pig, some take Sage and roast it in the belly of the Pig; then boyling Verjuice, Butter, and Currants *A Sauce for a Pig.* together, take and chop the sage small and mixing the brains of the Pig with it, put all together and so serve it up.

To make sawce for a loyn of Veal, take all kind of sweet Pot *A sauce for Veal.* herbs, and chopping them very small with the yelks of two or three Eggs, boyl them in Vinegar and Butter, with a few bread crums, and good store of sugar; then season it with Sugar and Cinnamon, and a Clove or two crushed, and so powre it upon the Veal, with the slices of Oranges and Lemons about the Dish.

Take Oranges and slice them thin, and put unto them White wine and Rose-water, the powder of Mace, Ginger, and Sugar, *Additions unto Sauces.* and set the same upon a Chafing dish of coals, and when it is half boyled, put to it a good lump of butter, and then lay good store of sippets of fine white bread therein, and so serve your Chickens upon them, and trim the sides of the dish with Sugar.

Take fair water, and set it over the fire: then slice good *Sauce for a Turkey.* store of Onions, and put into it, and also Pepper and salt, and good store of the Gravy that comes from the Turkey, and boyl them very well together: then put to it a few fine crums of grated bread to thicken it, a very little sugar, and some Vinegar, and so serve it up with the Turkey: or otherwise, take grated White bread and boyl it in white Wine till it be as thick as a *Gallantine*; in boyling put in good store of sa-

gar, and Cinamon, and then with a little Turnsole make it of a high murrey colour, and so serve it in saucers with the Turkey, in manner of Gallantine.

The best Gallantine.

Take the blood of a Swan, or any other great fowle, and put it into a dish, then take stewed Prunes, and put them into a strainer, and strain them into the blood; then set it on a chafing-dish and coals, and let it boyl; then stir it till it come to be thick, and season it very well with Sugar and Cinamon, and so serve it in Saucers with the fowl: but this sauce must be served cold.

Sawce for a Mallard.

Take good store of Onions, peel them and slice them, and put them into Vinegar and boyl them very well till they be tender; then put into it a good lump of sweet butter, and season it well with Sugar and Cinamon, and so serve it up with the fowl.

Of Carbonadoes.

Charbonadoes, or carbonadoes, which is meat broyled upon the coals (and the invention thereof was first brought out of France as appears by the name) are of divers kinds according to mens pleasures: for there is no meat either boyled or roasted whatsoever, but may afterwards be boyled if the master thereof be disposed; yet the general dishes which for the most part are to be carbonadoed, are, a breast of Mutton half boyled; a shoulder of mutton half roasted, the legs, wings, and carcaffes of Capon, Turkey, Goose, or any other fowl whatsoever, especially Land fowl.

What is to be Carbonadoed.

And lastly, the uttermost thick skin which covereth the ribbs of beef, and is called (being boyled,) the Inns of Court-Goose, and is indeed a dish used most for wantenness, sometimes to please the appetite: to which may also be added the broyling of Pigs heads, or the brains of any fowl whatsoever after it is roasted and dressed.

The manner of Carbonadoing.

Now for the manner of Carbonadoing, it is in this sort; you shall first take the meat you must Carbonado, and scotch it both above and below; then sprinkle good store of salt upon it, and baste it all over with sweet butter melted; which done, take your Broyling-iron, I do not mean a Grid-iron (though it be much used for this purpose) because the smoke of the coals, occasioned by the dropping of the meat, will ascend about it, and make

make it sink : but a Plate iron made with hooks and pricks, on which you may hang the meat, and set it close before the fire, and so the Plate heating the meat behind, as the fire doth before, it will both the sooner and with more neatness be ready : then, having turned it, and basted it till it be very brown, dredg it, and serve it up with vinegar and butter.

Touching the toasting of Mutton, Venison, or any joynt of Meat, which is the most excellentest of all Carbanadoes, you shall take the fattest and largest that can possibly be got (*for lean meat is loss of labour, and little meat not worth your time :*) and having scotcht it and cast salt upon it, you shall set it on a strong fork, with a dripping pan underneath it, before the face of a quick fire, yet so far off, that it may by no means scorch, but toast at leisure ; then with that which falls from it, & with no other basting, see that you baste it continually, turning it ever and anon many times and so oft, that it may soak and brown at great leisure ; and as oft as you baste it, so oft sprinkle Salt upon it ; and as you see it toast, scotch it deeper and deeper, especially in the thickest and most fleshy parts where the blood most resteth ; and when you see that no more blood droppeth from it, but the gravy is cleer and white, then you shall serve it up either with Venison sawce, with Vinegar, Pepper, and Sugar, Cinnamon, and the juce of an Orange mixt together, and warmed with some of the gravy.

Of the toasting
of Mutton.

Take Mutton or Lamb that hath been either roasted, or but barboyl'd, and with your knife scotch it many ways, then lay it in a deep dish, and put to it a pint of white Wine, and a little whole Mace, a little slic't Nutmeg, and some Sugar, with a lump of sweet butter, and stew it so till it be very tender ; then take it forth, and brown it on the Grid-iron, and then laying sippets in the former broth, serve it up.

Additions,
unto carbona-
does.
A Rasher of
Mutton or
Lamb.

Take any Tongue, whether of Beef, Mutton, Calves ; Red Deer or Fallow, and being well boyled peel them, cleave them, and scotch them many wayes ; then take three or four eggs broken ; some Sugar, Cinnamon, and Nutmeg, and having beaten it well together, put to it a Lemon cut in thinne slices, and another cleare peel'd, and cut into little four square bits, and then take the tongue, and

How to Car-
bonado
Tongues.

and lay it in: and then having melted good store of butter in a frying pan, put the tongue and the rest therein, and so frye it brown, and then dish it, and scrape sugar upon it, and serve it up.

Additions.



For dressing
Fish.

How to soufe
any fresh fish.

Take any fresh fish whatsoever (as Pike, Bream, Carpe, Barbel, Cheam, and such like,) and draw it, but scale it not; then take out the Liver and the refuse, and having opened it, wash it: then take a pottle of fair water, a pretty quantity of white Wine, good store of salt, and some vinegar, with a little bunch of sweet herbs, and set it on the fire: as soon as it begins to boyl, put in your fish, and having boyled a little, take it up into a fair vessel, then put into the liquor some grosse Pepper and Ginger, and when it is boyled well together with more salt, set it by to cool, and then put your Fish into it, and when you serve it up, lay Fennel thereupon.

How to boyl
small Fish.

To boyl small Fish, as Roches, Dace, Gudgeons, or Flounders, boyl White wine and water together with a bunche of choyce Herbs, and a little whole Mace, when all is boyl'd well together, put in your fish and scum it well: then put in the foal of a *Manchet*, a good quantity of sweet butter, and season it with Pepper and Verjuyce, and so serve it in upon sippets, and adorn the sides of the dish with Sugar.

To boyl a
Gurnet or
Rosh.

First draw your Fish, and either splint it open in the back, or joynt it in the back, and trusse it round; then wash it clean, and boyl it in Water and Salt, with a bunch of sweet Herbs then take it up into a large dish, and pour unto it Verjuyce, Nutmeg, Butter, and Pepper, and letting it stew a little, thicken it with the yelks of eggs: then hot remove it into another dish, and garnish it with slices of Oranges and Lemons, Barberies, Prunes, and Sugar and so serve it up.

After you have drawn, washt and scaled a fair large Carp, season it with Pepper, Salt, and Nutmeg, and then put it into a Coffin with good store of sweet butter, and then cast on Raisins of the Sun the juyce of Lemons, and some slices of Orange-pils, and then sprinkling on a little Vinegar, close it up and bake it.

First let your *Tench* bleed in the taylor, then scoure it, wash
it

it, and scall'd it, then having dried it, take the fine crumbs of Bread, sweet Cream, the yelks of Eggs, Currants clean wash'd, a few sweet herbs chopt small, season it with Nutmeg and Pepper, and make it into a stiff paste, and put it into the belly of the Tench, then season the fish on the out-side with Pepper, Salt, and Nutmeg, and so put it into a deep coffin with sweet butter, and so close up the Pye and bake it; then when it is enough draw it, and open it, and put into it a good piece of preserved Orange minc'd: Then take Vinegar, Nutmeg, Butter, Sugar, and the yelk of a new laid Egge, and boyl it on a Chafing-dish and Coals, alwayes stirring it to keep it from ending; then pour it into the pye, shake it well, and so serve it up.

How to stew
Trout.

Take a large Trout fair trimm'd, and wash it, and put it into a deep pewter dish, then take half a pint of sweet Wine, with a lump of butter, and a little whole Mace, Parsley, Savory, & Thyme, mince them all small, and put them into the Trouts belly, and so let it stew a quarter of an hour, then mince the yelk of a hard Egge, and strew it on the Trout, and laying the herbs about it, and scraping on Sugar, serve it up.

How to stew
Trout.

After you have drawn your Eeles, chop them into small pieces of three or four inches, and season them with Pepper, Salt, and Ginger, and so put them into the coffin with a good lump of Butter, great Raisins, Onions small chopt, and so close it, bake and serve it up.

How to bake
Eeles.

Next to these already rehearsed, our English House-wife must be skillful in Pastry, and know how and in what manner to bake all sorts of meat, and what paste is fit for every meat, and how to handle and compound such pasts. As for example, Red Deer, Venison, wild Boar, Gammons of Bacon, Swans, Elkes, Porpus, and such like standing dishes, which must be kept long, would be bak'd in a moist, thick, tough, course, and long lasting crust, and therefore of all other, your Rye-paste is best for that purpose; your Turkey, Capon, Pheasant, Partridge, Veal, Peacocks, Lamb, and all sorts of Water-fowl, which are to come to the Table more than once, (yet not many dayes) would be bak'd in a good white crust, some what thick; therefore your wheat is

The Pastry and
baked meats.

M m m

fit

fit for them; your Chickens, Calves-feet, Olives, Potatoes, Quinces, Fallow-Deer, and such like; which are most commonly eaten hot, would be in the finest, shortest, and thinnest crust, therefore your fine Wheat-flower, which is a little baked in the Oven, before it be kneaded, is the best for that purpose.

Of the mixture of Paste.

To speak then of the mixture and kneading of Paste, you shall understand, that your Rye paste would be kneaded onely with hot water, and a little Butter, or sweet Scam, and Rye-flower very finely sifted; and it would be made tough and stiff, that it may stand well in the rising, for the Coffin thereof must ever be very deep; your course Wheat-crust should be kneaded with hot Water, or Mutton-broth, and good store of Butter, and the Paste made stiff and tough, because that Coffin must be deep also. Your fine Wheat-crust must be kneaded with as much butter as water, and the Paste made reasonable light and gentle, into which you must put three or four Eggs or more, according to the quantity you blend together, for they will give it sufficient stiffening.

Of Paste-paſte.

Now for the making of Puff-paſte of the best kind, you shall take the finest Wheat-flower after it hath been a little bak'd in a pot in the Oven, and blend it well with Eggs, whites and yelks all together, and after the Paste is well kneaded, roul out a part thereof as thin as you please, and then spread cold sweet butter over the same; then upon the same butter roul another leaf of the Paste as before, and spread it with butter also; and thus roul leaf upon leaf with butter between, till it be as thick as you think good: and with it either cover any bak'd meat, or make paste for Venison, Florentine, Tart, or what dish else you please, and so bake it. There be some that to this Paste use Sugar, but it is certain, it will hinder the rising thereof, and therefore, when your Puff-paſte is bak'd, you shall dissolve Sugar into Rose-water, and drop it into the Paste as much as it will by any means receive, and then set it a little while in the oven after, and it will be sweet enough.

Of baking red Deer or Fallow, or any thing to keep cold.

When you bake red Deer, you shall first parboyl it, and take out the bones, then you shall, if it be lean, lard it; if fat, save that charge; then put it into a Presse to squeeze out the blood; then

then for a night lay it in a Meat-sauce made of Vinegar, small drink, and Salt; and then taking it forth, season it well with Pepper finely beaten, and salt well mixed together, and see that you lay good store thereof, both upon and in every open and hollow place of the Venison, but by no means cut any slashes to put in the Pepper, for it will of it self sink fast enough into the flesh, and be more pleasant in the eating. Then having raised the Coffin, lay in the bottom a thick course of butter, then lay the flesh thereon, and cover it all over with butter, and so bake it as much as if you did bake brown bread, then when you draw it, melt more butter with three or four spoonfuls of Vinegar, and twice so much Claret-wine, and at a vent-hole on the top of the lid, pour in the same till it can receive no more, and so let it stand and cool. And in this sort you may bake Fallow Deer, or Swan, or whatsoever else you please to keep cold, the Meat-sauce onely being left out, which is only proper to Red Deer. And if to your Meat-sauce you adde a little Turnsole, and therein steep Beef and Ram mutton: you must also in the same manner take the first for Red Deer Venison; and the later for Fallow, and a very good judgment shall not be able to say otherwise, then that it is of it self perfect Venison both in Taste, Colour, and the manner of cutting.

To bake Beef
or Mutton for
Venison.

To bake an excellent Custard or Dowset, you shall take good store of eggs, and putting away one quarter of the whites, beat them exceeding well in a Bason, and then mix with them the sweetest and thickest Cream you can get; for if it be any thing thin, the Custard will be wheyish: then season it with Salt, Sugar, Cinnamon, Cloves, Mace, and a little Nutmeg; which done, raise your Coffins of good tough Wheat-paste, being the second sort before spoken of: and if you please raise it in pretty works or angular forms, which you may do by fixing the upper part of the crust to the nether with the yolks of Eggs; then when the coffins are ready, strew the bottoms over a good thickness with Currants and Sugar, then set them into the Oven, and fill them up with the Confection before blended, and so drawing them, adorn all the tops with Caraway Comfits, and slices of Dates prickt right up, and so serve them up to the Table. To pre-

To bake a Custard or Dowset.

To bake an
Olive Pye.

vent the wheyishness of the Custard, dissolve into the first confection a little Iling-glass, and all will be firm.

To make an excellent Olive pyc, take sweet herbs, as Violet leaves, Strawberry leaves, Spinage, Succory, Endive, Thyme, and Sorrel, and chop them as small as may be, and if there be a Scallion or two amongst them, it will give the better taste; then take the yolks of hard eggs, with Currants, Cinnamon, Cloves, and Mace, and chop them among the herbs also; then having cut out long Olaves of a leg of Veal, roul up more than three parts of the herbs so mixed within the Olaves, together with a good deal of sweet butter; then having raised your Crust of the finest and best paste, strew in the bottom the remainder of the herbs, with a few great Raisins, having the stones pickt out, then put in the Olaves, and cover them with great Raisins, and a few Prunes: then over all lay good store of Butter, and so bake them, then being sufficiently bak'd, take Claret-wine, Sugar, Cinnamon, and two or three spoonfuls of Wine-Vinegar, and boyl them together, and then drawing the Pye, at a vent in the top of the lid put in the same, and then set it into the Oven again a little space, and so serve it forth.

To bake a
Marrow-bone
Pye.

To bake the best Marrow-bone pyc, after you have mixt the crusts of the best sort of paste, and raised the coffin in such a manner as you please; you shall first in the bottom thereof lay a course of Marrow of Beef, mixt with Currants, then upon it a lay of the soaks of Artichokes, after they have been boyled, and are divided from the Thistle; then cover them over with Marrow, Currants, and great Raisins, the stones pickt out; then lay a course of Potatoes cut in thick slices, after they have been boyled soft, and are clean pill'd; then cover them with Marrow, Currants, and great Raisins, the stones pickt out; then lay a layer of candied Eringo roots mixt very thick with the slices of Dates; then cover it with Marrow, Currants, great Raisins, Sugar, Cinnamon, and Dates, with a few Damask Prunes, and so bake it: and after it is bak'd, pour into it, as long as it will receive it, White-wine, Rose-water, Sugar, Cinnamon, and Vinegar mixt together, and candy all the Cover with Rose-water and

and Sugar only, and so set it into the Oven a little, and serve it forth.

To bake a Chicken Pye, after you have trust your Chickens, then broken their legs and breſt bones, and raised your cruſt of the beſt paſte, you ſhall lay them in the coſſin cloſe together, with their bodies full of butter; then lay upb them and underneath them Currants, great Raiſins, Prunes, Cinnamon, Sugar, whole Mace, and Salt; then cover all with great ſtore of Butter, and ſo bake it: after pour into it the ſame liquor you did in your Marrow-bone pye, with yelks of two or three Eggs beaten amongſt it, and ſo ſerve it forth.

To bake a
Chicken Pye.

To make good Red-Deer Veniſon of Hares, take a Hare or two or three, as you can or pleaſe, and pick all the fleſh from the bones; then put it into a Mortar either of wood or ſtone, and with a wooden Peſtle let a ſtrong perſon beat it exceedingly, and ever as it is beaten let one ſprinkle in ſome Vinegar, and ſome Salt: then when it is ſufficiently beaten, take it out of the Mortar, and put it into boyling water, and parboyl it; when it is parboyl'd, take it and lay it on a Table in a round lump, and lay a board over it, and with weights dreſs it hard as may be; then the water being preſt out of it, ſeaſon it well with Pepper and Salt; then lard it with the fat of Bacon ſo thick as may be, then bake it as you bake other Red-Deer, which is formerly deſcribed.

Additions to
the Paſtry for
Veniſon of
Hares.

Take a Hare and pick all the fleſh from the bones, and onely reſerve the head, then parboyl it well; which done, take it out and let it cool; as ſoon as it is cold, take at leaſt a pound and half of Raiſins of the Sun, and take out the ſtones, then mix them with a good quantity of Mutton-fuet, and with a ſharp ſhredding-Knife ſhred it as ſmall as you would do for a Chewet, then put to it Currants, and whole Raiſins, Cloves and Mace, Cinnamon and Salt; then having raiſed the Coſſin long-wiſe to the proportion of a Hare, firſt lay in the head, and then the aforeſaid meat, and lay the meat in the true proportion of a Hare, with neck, ſhoulders, and legs, and then cover the coſſin, and bake it as other bak'd meats of that nature.

To bake a
Hare-Pye.

Tale

A Gammon of Bacon Pye. Take a Gammon of Bacon, and only wash it clean; and then boyl it on a soft gentle fire, till it be boyl'd as tender as is possible; even and anon fleeting it clean; that by all means it may boyl white: then take off the sword; and farce it very well with manner of sweet and pleasant farving herbs; then strew store of Pepper over it, and prick it thicke with Cloves; then lay it in a coffin made of the same proportion, and lay good store of Butter round about it, and upon it, and strew Pepper upon the Butter, that as it melts, the Pepper may fall upon the Bacon; then cover it, and make the proportion of a Pig's head in paste upon it, and then bake it as you bake red Deer, or things of the like nature, only the paste would be of Wheat-meale.

A Herring Pye. Take white pickled Herrings of one nights watering, and boyl them a little, then take off the skin, and take only the backs of them, and pick the fish clean from the bones; then take good store of Raisins of the Sun, and stone them; and put them to the Fish; then take a Warden or two, and pare it, and slice it in small slices from the core, and put it likewise to the fish; then with a very sharp shredding Knife shred all as small and fine as may be: then put to it good store of Currants, Sugar, Cinnamon, slic't Dates, and so put it into the coffin, with good store of sweet Butter, and so cover it, and leave onely a round vent-hole on the top of the lid, and so bake it like Pies of that nature. When it is sufficiently bak't, draw it out, and take Claret Wine, and a little Verjuice, Sugar, Cinnamon, and sweet Butter; and boyl them together: then put it in at the vent-hole, and shake the Pye a little, and put it again into the Oven for a little space, and so serve it up, the lid being candied over with Sugar, and the sides of the dish trimmed with Sugar.

A Ling Pye. Take the Jole of the best Ling that is not much watered, and is well sodden and cold; but whilst it is hot, take off the skin, and pare it clean underneath, and pick out the bones clean from the fish; then cut it into gros bits, and let it lye; then take the yelks of a dozen Eggs boyl'd exceeding hard, and put them to the Fish; and shred all together as small as is possible, then rub all manner of the best and finest pot-herbs, and chop them wel

derful

desful small, and mix them also with the Fish, then season it with Pepper, Cloves, and Mace, and so lay it in a Coffin with great store of sweet butter, so as it may swim therein, and then cover it, and leave a vent-hole open in the top, and when it is baked, draw it, and take Verjuice, Sugar, Cinnamon, and Butter, and boyl them together, and first with another anoine all the lid over with that liquor, and then scrape good store of Sugar upon it; then pour the rest of the liquor in at the vent-hole, and then set it into the Oven again for a very little space, and then serve it up as Pyes of the same nature, and both these Pyes of Fish before rehearsed, are extraordinary and special Lenten dishes.

Take a pint of the sweetest and thickest Cream that can be gotten, and set it on the fire in a very clean scoured Skillet, and put into it Sugar, Cinnamon, and a Nutmeg cut into four quarters, and so boyl it well: then take the yelks of four Eggs, and take off the slimes, and beat them well with a little sweet Cream, then take the four quarters of the Nutmeg out of the Cream, then put in the Eggs, and stir it exceedingly till it be thick: then take a fine Manchet, and cut it into thin shivers, as much as will cover a dish bottom, and holding it in your hand, pour half the Cream into the dish: then lay your bread over it, and cover the bread with the rest of the Cream, and so let it stand till it be cold: then strew it over with Caraway Comfits, and prick up some Cinnamon Comfits, and some sliced Dates, or for want thereof, scrape all over it some Sugar, and trim the sides of the dish with Sugar, and so serve it up.

Take a pint of the best and thickest Cream, and set it on the fire in a clean Skillet, and put into it Sugar, Cinnamon, and a Nutmeg cut into four quarters, and so boyl it well, then put it into the dish you intend to serve it in, and let it stand to cool till it be more than luke-warm; then put in a spoonful of the best Earning, and stir it well about, and so let it stand till it be cold; and then strew Sugar upon it, and so serve it up: and this you may serve either in dish, glass, or other plate.

Take Calves-feet well boyl'd, and pick all the meat from the A Calves-foot bones; then being cold, shred it as small as you can; then sea- Pye.
son

son it with Cloves and Mace, and put in good store of Currants, Raisins, and Prunes; then put it into the coffin with good store of sweet Butter; then break in whole sticks of Cinnamon, and a Nutmeg slic'd into four quarters, and season it before with Salts; then close up the coffin, and only leave a Vent-hole. When it is bak'd, draw it, and at the vent-hole put in the same liquor you put in the Ling-pye, and trim the lid after the same manner, and so serve it up.

Oyster Pye.

Take of the greatest Oysters drawn from the shells, and parboyl them in Verjuice; then put them into a Cullender, and let all the moisture run from them, till they be as dry as possible; then raise up the coffin of the Pye, and lay them in; then put in them good store of Currants, and fine powdered Sugar, with whole Mace, whole Cloves, whole Cinnamon, and Nutmeg slic'd, Dates cut, and good store of sweet Butter; then cover it, and only leave a vent-hole. When it is bak'd, then draw it, and take White-wine, and White-wine Vinegar, Sugar, Cinnamon, and sweet Butter, and melt it together; then first trim the lid therewith, and candy it with Sugar; then pour the rest in at the Vent-hole, and shake it well, and so set it in the Oven again for a little space, and so serve it up, the Dish-edges trimm'd with Sugar. Now some use to put to this Pye Onions sliced and shred, but that is referred to discretion, and to the pleasure of the Taste.

To recover Venison that is tainted.

Take strong Ale, and put to it Wine-vinegar, as much as will make it sharp, then set it on the fire, and boyl it well, and scum it, and make of it a strong brine with Bay-salt, or other salt; then take it off, and let it stand till it be cold, then put your Venison into it, and let it lye in it full twelve hours; then take out from that meer sawce, and press it well, then parboyl it, and season it with Pepper and Salt, and bake it, as hath been before shewed in this Chapter.

A Chewet pye.

Take the brawns, and the wings of Capons, and Chickens, after they have been roasted, and pull away the skin, then shred them with Mutton-suet very small; then season it with Cloves, Mace, Cinnamon, Sugar, and Salt; then put to Raisins of the Sun, and Currants, and slic'd Dates, and Orange-peels, and being well mixt together, put it into small coffins made

for the purpose, and strew on the top of them good store of Carraway Comfits: then cover them and bake them with a gentle heat: and these Chewets you may also make of roasted Veal, seasoned as before shewed, and of all parts the Loyn is the best.

Take a Legge of Mutton, and cut the best of the flesh from A mired pyc. the bone, and parboyl it well: then put to it three pound of the best Mutton-suet, and shred it very small; then spread it abroad, and season it with Salt, Cloves, and Mace: then put in good store of Currants, great Raisins, and Prunes clean washed and picked, a few Dates sliced, and some Orange-pills sliced: then being all well mixt together, put it into a Coffin, or into divers Coffins, and so bake them: and when they are served up, open the lids, and strew store of Sugar on the top of the meat, and open the lid. And in this sort you may also bake Beef or Veal, only the Beef would not be parboyl'd, and the Veal will ask a double quantity of Suet.

Take the fairest and best Pippins, and pare them, and make a A Pippin pyc. hole in the top of them; then prick in each hole a Clove or two, and put them into the Coffin, then break in whole sticks of Cinnamon, and slices of Orange-pills, and Dates, and on the top of every Pippin, a little piece of sweet Butter; then fill the coffin, and cover the Pippins over with Sugar: then close up the Pye, and bake it, as you bake Pyes of the like nature: and when it is bak'd, anoint the lid over with store of sweet Butter, and then strew Sugar upon it a good thickness, and set into the Oven again for a little space, as while the meat is disbing up, and then serve it.

Take of the fairest and best Wardens, and pare them, and A Warden pyc. take out the hard cores on the top, and cut the sharp ends at the bottom flat; then boyl them in White-wine and Sugar, untill the Syrup grow thick: then take the Wardens from the Syrup in a clean dish, and let them cool, and set them into the coffin, and prick Cloves in the top, with whole sticks of Cinnamon, and great store of Sugar as for Pippins: then cover it, and only reserve a Vent-hole, so set it in the Oven and bake it: when it is bak'd, draw it forth, and take the first Syrup in
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which the Wardens were boyld, and taffelin, and if it be not sweet enough, then put in more Sugar, and some Rose-water, and boyl it again a little; then pour it in at the Vent-hole, and shake the Pye well; then take sweet Butter and Rose-water melted, and with it anoint the Pye-lid all over, and then strew on it store of Sugar, and so set it into the Oven again a little space, and then serve it up; and in this manner you may also bake Quinces.

To preserve
Quinces to
bake all the
year.

Take the best and sweetest Wort, and put to it good store of Sugar; then pare and cover the Quinces clean, and put them therein, and boyl them till they grow tender; then take out the Quinces and let them cool, and let the Pickle in which they were boyled stand to use also. Then strain it through a rauge or sieve, then put the Quinces into a sweet earthen pot, then pour the Pickle or Syrup into them, so as all the Quinces may be quite covered all over; then stop up the pot close, and set it in a dry place, and once in fix or seven weeks look upon it; and if you see it shrink, or do begin to hoar or mould, then pour out the Pickle or Syrup, and renewing it boyl it over again, and as before put it to the Quinces being cold, and thus you may preserve them for the use of baking, or otherwise, all the year.

A Pippin-Tart.

Take Pippins of the fairest, and pare them, and then divide them just in halfe, and take out the Cores clean; then having round the Cobin flat, and raised up a small Verge of an Inch, or more high, lay in the Pippins with the hollow side downward, as close one to another as may be; then lay here and there a Clove, and here and there a whole Stick of Cinnamon, and a little bit of Butter. Then cover all clean over with Sugar, and so cover the Cobin, and bake it according to the manner of Tarts; and when it is bak'd, then draw it out, and having boyled Butter and Rose-water together, anoint all the Lid over therewith, and then scrape or strew on it good store of Sugar, and so set it in the Oven again, and after serve it up.

A Codlin-tart.

Take green Apples from the Tree, and coddle them in colding water without breaking; then pull the skin from them, and so divide them in halfe, and cut out the Cores, and so

lay them into the Coffin; and do so in everything as you did in the Pippin-tart; and before you cover it, which the Sugar is cast in, see you sprinkle upon it good store of Rose-water, then close it, and do as before shewed.

Take Codlins as before said; and pill them and divide them in halves; and core them, and lay a leafe thereof in the bottom of the Pye: then scatter here and there a Clove, and here and there a piece of whole Cinamon, then cover them all over with Sagar, then lay another leafe of Codlins, and do as before said, and so another, till the Coffin be all filled; then cover all with Sugar, and here and there a Clove and a Cinamon-stick, and if you will a Shedd Orange-pill, and a Date; then cover it and bake it as the Pies of that nature. When it is bak'd, draw it out to the Oven, and take off the thickest and best Cream, with good store of Sugar, and give it one boyl or two on the fire, then open the Pye, and put the Cream therein, and mix the Codlins all about, then cover it, and having trimm'd the lid, (as was before shewed in the like Pies and Tarts) set it into the Oven again for halfe an hour, and so serve it forth.

Take the fairest Cherries you can get, and pick them clean from leaves and stalks: then spread out your Coffin as for your Pippin-Tart, & cover the bottom with Sugar, then cover the Sugar all over with Cherries, then cover those Cherries with Sugar, some sticks of Cinamon, and here and there a Clove, then lay in more Cherries, and so more Sugar, Cinamon and Cloves, till the coffin be filled up: then cover it, and bake it in all points, as the Codlin and Pippin Tart, and so serve it: and in the same manner you may make Tarts of Gobseberries, Strawberries, Raspberries, Bilberries, or any Berry whatsoever.

Take Rice that is clean picked, and boyl it in sweet Cream, till it be very soft: then let it stand and cool, and put into it good store of Cinamon and Sugar, and theyells of a couple of Eggs, and some Currants, stir and beat all well together; then having made the coffin in the manner before said for other Tarts, put the Rice therein, and spread it all over the coffin: then break many little bits of sweet butter upon it all over, and scrape some Sugar over it also: then cover the Tart and bake it, and trim it in all points as hath been before shewed, and so serve it up.

A Florentine.

Take the Kidneys of Veal after it hath been well roasted, and is cold: then shred it as fine as is possible; then take all sorts of sweet Pot-herbs, or farcing herbs, which have no bitter or strong tast, and chop them as small as may be, and putting the Veal into a large dish, put the herbs unto it, and good store of clean washt Currants, Sugar, Cinamon, the yelks of four Eggs, a little sweet Cream warmed, and the fine grated Crums of a half-peny loaf and salt, and mix all exceedingly together: then take a deep pewter dish, and in it lay your paste very thin rouled out, which paste you must mingle thus: Take of the finest Wheat-flower a quart, and a quarter so much Sugar, and a little Cinnamon, then break into it a couple of Eggs, then take sweet cream and butter melted on the fire and with it knead the paste, and as was before said, having spread butter all about the dishes sides, then put in the Veal, and break pieces of sweet butter upon it, and scrape sugar over it: then rowl out another paste reasonable thick, and with it cover the dish all over, & closing the old paste, with the beaten whites of Eggs very fast together, then with your knife cut the lid into divers pretty works, according to your fancy, then set it in the Oven and bake it with Pies and Tarts of like nature: when it is bak'd, draw it and trim the lid with Sugar, as hath been shewed in Tarts, and so serve it up with your second course.

A Prune Tart.

Take of the fairest Damask Prunes you can get, and put them in a clean Pipkin with fair water, Sugar, unbruised Cinamon, and a branch of two of Rosemary, and if you have bread to bake, stew them in the Oven with your bread: if otherwise, stew them on the fire. When they are stewed, then bruise them all to mash in their syrup, and strain them into a clean dish; then boyl it over again with Sugar, Cinamon, and Rose-water, till it be as thick as Marmelad: then set it to cool, then make a reasonable tough paste with fine flower, Water, and a little butter, and rowl it out very thin: then having patterns of paper cut into divers proportions, as Beasts, Birds, Arms, Knots, Flowers, and such like, Lay the patterns on the paste, and so cut them accordingly, then with your fingers pinch up the edges of the paste, and set the work in

good proportion: then prick it well all over for rising, and set it on a clean sheet of large Paper, and so set it into the Oven, and bake it hard: then draw it, and set it by to cool: and thus you may do by a whole Oven full at one time, as your occasion of expence is: then against the time of Service come, take of the Confection of Prunes before rehearsed, and with your Knife or a Spoon fill the Coffin according to the thickness of the Verge, then strew it over with Carraway Comfits, and prick long Comfits upright in it, and so taking the Paper from the bottom, serve it on a Plate in a Dish or Charger according to the bigness of the Tart, and at the second course: and this Tart carrieth the colour black.

Take Apples and pare them, and slice them thin from the Core into a Pipkin with white-wine, good store of Sugar, Cinamon, a few Saunders and Rose-water, and so boyl it till it be thick: then cool it and strain it, and beat it very well together with a Spoon, then put it into the Coffin as you did the Prune-Tart, and adorn it also in the same manner, and this Tart you may fill thicker or thinner, as you please to raise the Edge of the Coffin, and it carrieth colour red.

Apple Tart.

Take good store of Spinnage, and boyl it in a Pipkin with White-wine till it be very soft as Pap: then take it and strain it well into a Pewter dish, not leaving any part unstrained: then put to it Rose-water, great store of Sugar and Cinamon, and boyl it till it be as thick as Marmalad, then let it cool, and after fill your Coffin and adorn it, and serve it in all points as you did your Prune-Tart, and this carrieth the colour green.

A Spinnage-Tart.

Take the yolks of Eggs, and break away the films, and beat them well with a little Cream, then take of the sweetest and thickest Cream that can be got, and set it on the fire in a clean skillett, and put into it Sugar, Cinamon, Rose-water, and then boyl it well as when it is boyl'd, and still boyling, stir it well, and as you stir it put in Eggs, and so boyl it till it curdle: then take it from the fire, and put it into a Strainer, and first let the thin Whey run away into a By-dish, then strain

A yellow Tart.

strain the rest very well, and beat it well with a spoon; and so put it into the Tart Coffin; and adorn it as you do your Prune-Tart; and so serve it, and this carryeth the colour yellow.

A white Tart.

Take the whites of Eggs and beat them with Rose-water, and a little sweet cream; then set on the fire good thick sweet cream, and put into it Sugar, cinnamon, rose-water and boyl it well, and as it boyls stir it exceedingly, and in the stirring put in the whites of Eggs, then boyl it till it curd, and after do in all things as you did to the yellow Tart; and this carrieth the colour white, and it is a very pure white, & therefore would be adorned with red Caraway Coriander, and as this; so with blanched Almonds like white Tarts, and full as pure. Now you may if you please put all these several colours; and several stuffs into one Tart, as thus; If the Tart be in proportion of a beast; the body may be of one colour, the eyes of another; the teeth of another; the talons of another; and of birds; the body of one; the eyes of another; the legs of another, and every feather in the wings of a several colour, according to fancy; and so likewise in Arms, the Field one colour, the Charge of another, according to the form of the Coat-armour; as for Mantles, Tails, and devices about Arms, they may be set out with several colours of Preserves, Conservees, Marmalades, and good in cakes, and as you shall find occasion or invention; and so likewise of knives, one tail of one colour, and another of another, and so of as many as you please.

An Herb-Tart.

Take Sorrel, Spinage, Parsly, and boyl them in water till they be very soft as Pap; then take them up and press the water clean from them, then take good store of yolks of Eggs boyl'd very hard; and chopping them with the herbs exceeding small, then put in good store of Currants, Sugar, and Cinnamon, & stir all well together; then put them into a deep Tart-Coffin with good store of sweet butter, and cover it; and bake it like a Pippin-Tart, and adorn the Lid after the baking in that manner also, and so serve it up.

To bake a Pudding-pye.

Take a quart of the best Cream, and set it on the fire, and slice a Loaf of the lightest white bread into thin slices; and put into it, and let it stand on the fire till the Milk begin to rise; then

then take it off, and put it into a bason, and let it stand till it be cold, then put in the yolks of four Eggs, and two Whites, good store of Currants, Sugar, Cinnamon, Cloves, Mace, and plenty of Sheeps-suet finely shred, and a good season of Salt, then trim your Rot very well round about with butter, and so put in your Badding, and bake it sufficiently, then when you serve it strewe Sugar upon it.

Take the best and sweetest Cream, and boyl it with good store of Sugar and Cinnamon, &c a little Rose-water, then take it from the fire, and put it into clean pick'd Rice, but not so much as to make it thick, and let it steep therein till it be cold, then put in the yolks of six Eggs, and two whites, Currants, Cinnamon, Sugar, and Rose-water, and Salt, then put it into a pan or pot as thin as it were a Custard, and so bake it, and serve it in the pot it is baked in, trimming the top with Sugar or Comfits.

There are a world of other bak'd Meats and Pies, but for as much as whosoever can do these, may do all the rest, because herein is contained all the art of Seasonings. I will trouble you with no further repetitions, but proceed to the manner of making Banqueting stuff, and conceited dishes, with other pretty and curious secrets, necessary for the understanding of our English Housewife: for albeit, they are not of general use, yet in their due times, they are so needful for adoration, that whosoever is ignorant therein, is lame, and but the half part of a House-wile.

To make past of Quinces, first boyl your Quinces whole, and when they are soft pare them, and cut the Quince from the Core, then take the finest Sugar you can get, finely beaten or searfed, and put in a little Rose-water, and boyl it together till it be stiff enough to mould, and when it is cold, then role it, and print it. A pound of Quinces will take a pound of Sugar, or near therabouts.

To make thin Quince-cakes, take your Quince when it is boyled soft as before said, and dry it upon a pewter-plate, with a lutehear, and be ever stirring of it with a slice till it be hard, then take searfed Sugar quantity for quantity, and strewe it into the Quince, as you beat it in a wooden or stone mortar, and so roul them thin and print them.

Banqueting
fruit and conceited
dishes.

To make past
of Quinces.

To make thin
Quince-cakes.

To preserve
Quinces.

To preserve quinces, first pare your quinces, and take out the cores, and boyl the cores and parings altogether in fair water, and when they begin to be soft, take them out and strain your Liquor, and put the weight of your Quinces in Sugar, and boyl the Quinces in the Syrup till they be tender: then take them up, and boyl the Syrup till it be thick. If you will have your Quinces red, cover them in the boyling; and if you will have them white, do not cover them.

To make Ipo-
cras,

To make Ipocras, take a pottle of Wine: two Ounces of good Cinamon, half an ounce of Ginger, nine Cloves, and six Pepper corns, and a Nutmeg, and bruise them and put them into the wine with some Rosemary flowers, and so let them steep all night, and then put in Sugar a pound at least, and when it is well settled, let it run through a woollen bag made for that purpose: thus if your Wine be Claret, the Ipocras will be red; if white, then of that colour also.

To make Jelly.

To make the best Jelly, take Calves feet and wash them, and scald off the hair as clean as you can get it: then split them and take out the fat, and lay them in water and shift them, then bruise them in fair water untill it will jelly, which you shall know, by now and then cooling a Spoonful of the Broth: when it will jelly, then strain it, and when it is cold, then put in a pint of Sack, and whole Cinamon, and Sugar, and a little Rose-water, and boyl all well together again. Then beat the white of an Egg and put into it, and let it have one boyl more: then put in a branch of Rosemary into the bottom of your Jelly bag, and let it run through once or twice, and if you will have it coloured, then put in a little Townsal. Also if you want Calves-feet, you may make as good Jelly if you take the like quantity of Iling-glass, and so use no Calves-feet at all.

To make
Leech.

To make the best Leech, take Iling-glass, and lay it two hours in water, and shift it and boyl it in fair water, and let it cool, then take Almonds, and lay them in cold water till they will blanch; and then stamp them and put to new milk, and strain them, and put in whole Mace and Ginger sliced, and boyl them till it tast well of the spice; then put in your Iling-glass and Sugar, and a little Rose-water, and let them all run through a Strainer.

To make Gin-
ger-bread.

Take Claret-wine, and colour it with Townsal, and put in Sugar

Sugar, and set it to the fire: then take wheat-bread finely grated and sifted, and Licoras, Anniseeds, Ginger, and Cinamon beaten very small and searfed; and put your bread and your spice together, and put them into the wine and boyl it, and stir it till it be thick, then mould it and print it at your pleasure, and let it stand neither too moist, nor too warm.

To make red Marmalade of Quinces, take a pound of Quinces, and cut them in half, and take out the cores, and pare them; then take a pound of Sugar, and a quart of fair water, and put them all into a Pan, and let them boyl with a soft fire, and sometimes turn and keep them covered with a Pewter-dish, so that the steam or air may come a little out: the longer they are in boyling, the better colour they will have: and when they be soft take a Knife, and cut them cross upon the top, it will make the syrup go through, that they may be all of the like colour: then set a little of your syrup to cool, and when it beginneth to be thick, then break your Quinces with a slice or spoon, so small as you can in the Pan, and then strew a little fine Sugar in your boxes bottom, and so put it up.

To make white Marmalade, you must in all points use your Quinces as before said; only you must take but a pint of water to a pound of Quinces, and a pound of Sugar, and boyl them as fast as you can, and cover them not at all.

To make the best Jumbals, take the whites of three Eggs, and beat them well, and take off the froth; then take a little milk and a pound of fine wheat flower and Sugar together finely sifted, and a few Anniseeds well rubb'd and dryed, and then work all together as stiff as you can work it, and so make them in what forms you please, and bake them in a soft oven upon white papers.

To make Bisket bread, take a pound of fine flower, and a pound of Sugar finely beaten and searfed, and mix them together, then take eight eggs, & put four yelks, & beat them very well together, then strew in your flower & sugar as you are beating of it, by a little at once, it will take very neer an hours beating: then take half an ounce of Anniseeds and Coriander seeds, and let them be dryed and rubb'd very clean, and put them in: then rub your Bisket-pans with cold sweet butter as thin as you can, and so put it in, and bake it in an Oven: but if you would

have thin Cakes, then take fruit-dishes, and rub them in like sort with butter, and so bake your Cakes on them, and when they are almost baked, turn them, and thrust them down close with your hand. Some to this Bisket-bread will add a little Cream, and it is not amiss, but excellent good also.

To make finer Jumbals. To make Jumbals more fine and curious than the former, and nearer to the taste of the Macaroon, take a pound of Sugar, beat it fine, then take as much Wheat-flower, and mix them together, then take two whites, and one yolk of an Egg, half a quarter of a pound of blanched Almonds: then beat them very fine altogether, with half a dish of sweet Butter, and a spoonful of Rose-water, and so work it with a little Cream till it come to a very stiff paste, then roul them forth as you please: and hereto you shall also, if you please, adde a few dried Anniseeds finely rubbed, and strewed into the paste, and also Coriander seeds.

To make dry Sugar Leach. To make a dry Sugar Leach, blanch your Almonds, and beat them with a little Rose-water, and the white of an Egg, and you must beat it with a great deal of Sugar, and work it as you would work a piece of paste: then roul it and print it as you did other things, only be sure to strew Sugar in the print for fear of cleaving too.

To make Leach Lombard. To make Leach Lombard, take half a pound of blanched Almonds, two ounces of Cinamon beaten and searfed, half a pound of Sugar; then beat your Almonds, and strew in your Sugar and Cinamon till it come to a paste, then roul it, and print it, as aforesaid.

To make fresh Cheese. To make an excellent fresh Cheese, take a pottle of Milk as it comes from the Cow, and a pint of Cream: then take a spoonful of Runnet or Earning and put it unto it, and let it stand two hours; then stir it up, and put it into a fine cloth, and let the Whey drain from it: then put it into a bowl, and take the yolk of an Egg, a spoonful of Rose-water, and bray them together with a very little Salt, with Sugar and Nutmegs, and when all these are brayed together, and searcd, mix it with the Curd, and then put it into the Cheese-fat with a very fine cloth.

How to make course Ginger-bread. To make course Ginger-bread, take a quart of Honey, and set it on the coals, and refine it: then take a penny-worth of Ginger,

Ginger, as much Pepper, as much Licoras, and a quarter of a pound of Anniseeds, and a penny-worth of Saunders: all these must be beaten and searfed, and so put into the hony; then put in a quarter of a pint of Claret-wine, or old Ale: then take three penny manchets finely grated, and strew it among the rest, and stir it till it come to a stiff paste, and then make into Cakes, and dry them gently.

To make ordinary Quince-cakes, take a good piece of preserved Quince, and beat it in a mortar, & work it up into a very stiff paste with fine searst Sugar; then print it, and dry them gently.

How to make
Quincecakes
ordinary.

To make most artificial Cinamon sticks, take an ounce of Cinamon and pound it, and half a pound of Sugar: then take some Gum-dragon, and put it in steep in Rose-water: then take thereof to the quantity of a Hazel-nut, and work it out and print it, and roul it in form of a Cinamon-stick.

How to make
Cinamon
sticks.

To make Cinamon-water, take a pottle of the best Ale, and a pottle of Sack-lees, a pound of Cinamon sliced fine, and put them together, and let them stand two dayes; then distill them in a Limbeck or Glasse Still.

How to make
Cinamon-
water.

To make Wormwood-water, take two gallons of good Ale, a pound of Anniseeds, half a pound of Licoras, and beat them very fine; and then take two good handfuls of the crops of Wormwood, and put them into Ale, and let them stand all night, and then distill them in a Limbeck with a moderate fire.

How to make
Wormwood
water.

To make sweet water of the best kind, take a thousand Damask Roses, two good handfuls of Lavender tops, a three-penny weight of Mace, two ounces of Cloves bruised, a quart of running water: put a little water into the bottom of an earthen pot, and then put in your Roses and Lavender, with the Spices by little and little, and in the putting in, always knead them down with your fist, and so continue it untill you have wrought up all your Roses and Lavender, and in the working between put in always a little of your water: then stop your pot close, and let it stand in four dayes, in which time every morning and evening put in your hand, and pull from the bottom of your pot the said Roses, working it for a time, and then distill it, and hang in the glasse of water a grain or two of Musk wrapt up in a piece of Sarcenet, or fine cloth.

To make
sweet water.

Another way. Others to make sweet water, take of Irees two ounces, of Calamus half an ounce, of Cypress roots half an ounce, of yellow Saunders nine drams, of Cloves bruised one ounce, of Storax and Calamint one ounce, and of Musk twelve grains, and infusing all these in Rose-water, distill it.

To make Date-Leach. To make an excellent Date-Leach, take Dates, and take out the stones, and the white Rinds, and beat them with Sugar, Cinamon, and Ginger, very finely; then work it as you would work a piece of paste, and then print them as you please.

To make Sugar plate. To make a kind of Sugar-plate, take Gum-Dragon, and lay it in Rose-water two days: then take the powder of fair Heps and Sugar, and the juice of an Orange, beat all these together in a Mortar, then take it out, and work it with your hand, and print it at your pleasure.

To make Spice Cakes. To make excellent Spice-cakes, take half a peck of very fine Wheat-flower, take almost one pound of sweet Butter, and some good Milk and Cream mixt together, set it on the fire, and put in your Butter, and a good deal of Sugar, and let it melt together: then strain Saffron into your milk a good quantity: then take seven or eight spoonfuls of good Ale-barm, and eight eggs with two yolks, and mix them together, then put your Milk to it when it is somewhat cold, and into your flower put Salt, Anniseed bruised, Cloves, and Mace, and a good deal of Cinamon; then work all together good and stiff, that you need not work in any flower after, then put in a little Rose-water cold, then rub it well in the thing you knead it in, and work it thoroughly: if it be not sweet enough, scrape in a little more Sugar, and pull it all in pieces, and hurle in a good quantity of Currants, and so work all together again, and bake your Cake as you see cause, in a gentle warm Oven.

To make Banbury Cakes. To make a very good Banbury Cake, take four pounds of Currants, and wash and pick them very clean, and dry them in a cloth: then take three Eggs, and put away one yolk; and beat them and Grain them with Bism, putting thereto Cloves, Mace, Cinamon, and Nutmegs; then take a pint of Cream, and as much Mornings-milk, and set it on the fire till the Cold be taken away: then take flower, and put in good store of cold.

cold butter and sugar, then put in your eggs, barm and meal, and work them all together an hour or more; then save a part of the past, and the rest break in pieces; and work in your Currants; which done, mould your Cake of what quantity you please, and then with that past, which hath not any Currants, cover it very thin, both underneath and aloft. And so bake it according to the bigness.

To make the best March-pane, take the best Jordan Almonds, and blanch them in warm water, then put them into a stone-mortar, and with a wooden Pestle beat them to Pap, then take of the finest refined Sugar well sear'd, and with it Damask Rose-water, beat it to a good stiff past, allowing almost to every Jordan Almond, three spoonfuls of Sugar, then when it is brought thus to a paste, lay it upon a fair Table, and strewing sear'd Sugar under it, mould it like leaven, then with a rowling-pin rowl it forth, and lay it upon wafers wash'd with Rose-water; then pinch it about the sides, and put it into what form you please; then strew sear'd sugar all over it; which done, wash it over with Rose-water and Sugar mixt together, for that will make the Ice; then adorn it with Comfits, gilding, or whatsoever devices you please, and so set it into a hot Stove, and there bake it crispy, and serve it forth. Some use to mix with the paste Cinamon and Ginger finely sear'd, but I refer that to your particular taste.

To make the best March-pane.

To make paste of *Geros*, you shall take Quinces after they have been boyled soft, and beat them in a mortar, with refined Sugar, Cinamon, and Ginger finely sear'd, and Damask Rose-water, till it come to a stiffe paste; and rowl it forth, and print it, and so bake it in a Stove; and in this sort you may make paste of Peas, Apples, Wardens, Plums of all kinds, Cherries, Barberries, or what other fruits you please.

To make paste of *Geros*, or any other past.

To make Conserve of any fruit you please, you shall take the fruit you intend to make Conserve of, and if it be Stone-fruit, you shall take out the Stones: if other fruit, take away the paring and core, and then boyl them in fair running water to a reasonable height: then drain them from thence, and put them into a fresh vessel with Claret-wine or White-wine, according to the colour of the fruit: and so boyl them

To make any Conserve.

to a thick pap, all to mashing, breaking, and stirring them together: and then to every pound of pap, put to a pound of Sugar, and so stir them all well together, and being very hot, strain them through fair Strainers, and so pot it up.

To make a
Conserve of
Flowers.

To make conserve of Flowers, as Roses, Violets, Gilliflowers, and such like: you shall take the flowers from the stalks, and with a pair of sheers cut away the white ends at the roots thereof, and then put them into a Stone-mortar, or wooden Brake, and there crush or beat them, till they become to a soft substance: and then to every pound thereof take a pound of fine refined Sugar, well sear'd, and beat it altogether, till it come to one entire body, and then pot it up, and use it as occasion shall serve.

To make Wa-
fers.

To make the best Wafers, take the finest Wheat-flower you can get, and mix it with Cream, the yolks of Eggs, Rose-water, Sugar, and Cinnamon, till it be a little thicker than Pancake-batter, and then warming your Water-Irons on a charcoal-fire, anoint them first with sweet butter, and then lay on your Batter, and press it, and bake it white or brown at your pleasure.

To make Mar-
malade of O-
ranges.

To make an excellent Marmalade of Oranges, take the Oranges, and with a Knife pare off as thin as is possible the uppermost rind of the Orange; yet in such sort, as by no means you alter the colour of the Orange: then steep them in fair water, changing the water twice a day, till you find no bitterness of taste therein; then take them forth, and first boyl them in fair running water, and when they are soft, remove them into Rose-water, and boyl them therein till they break; then to every pound of the Pulp, put a pound of refined Sugar, and so having masht, and stirring them all well together, strain it through very fair strainers into boxes, and so use it as you shall see occasion.

Additions to
Banqueting
stuff.
To make fine
Cakes.
Fine bread.

Take a Pottle of flower, and a pound of Sugar, a little Mace, and good store of water to mingle the flower into a stiff paste, and a good drasim of Salt, and so knead it, and roul out the Cakes thin, and bake them on papers.

Take a quarter of a pound of fine Sugar well beaten, and as much

much flower finely bolted, with a great quantity of Anniseeds a little bruised, and mingle all together; then take two Eggs, and beat them very well, whites and all; then put in the mingled stuff aforesaid, and beat all together a good while, then put it into a mould, wiping the bottom ever first with Butter, to make it come out easily, and in the baking turn it once or twice as you shall have occasion, and so serve it whole or in slices at your pleasure.

Take sweet Apples, and stamp them as you do for Cider, then press them through a bag as you do Verjuice, then put it into a firkin wherein you will keep your Quinces, & then gather your Quinces, and wipe them clean, and neither core them nor pare them, but only take the Blacks from the tops, and so put them into the firkin of Cider, and therein you may keep them all the year very fair, and take them not out of the liquor, but as you are ready to use them, whether it be for pyes, or any other purpose, and then pare them, and core them as you think good.

To preserve
Quinces for
Kitchen Ser-
vice.

Take a gallon of Claret or White-wine, and put therein four ounces of Ginger, and an ounce and half of Nutmegs, of Cloves one quarter, of Sugar four pound; let all this stand together in a pot at least twelve hours, then take it, and put it into a clean bag made for the purpose, so that the Wine may come with good leisure from the Spices.

To make Ipo-
cras.

Take quinces, and wipe them very clean, and then core them, and as you core them, put the cores straight into fair water; and let the cores and the water boyl, when the water boyleth, put in the Quinces unpared, and let them boyl till they be tender, and then take them out, and pare them, and ever as you pare them, put them strait into Sugar finely beaten: then take the water they were sodden in, and strain it through a fine cloth, and take as much of the same water as you think will make Syrup enough for the Quinces, and put in some of your Sugar and let it boyl a while, and then put in your Quinces, and let them boyl a while, and turn them, and cast a good deal of Sugar upon them; they must seeth apace, and ever as you turn them, cover them still with Sugar, till you have bestowed all your Sugar: and when you think that your Quinces are tender enough, take them forth, and if your Syrup be not stiff enough,


To preserve
Quinces.

you

you may seeth it again after the Quinces are forth. To every pound of Quinces you must take more than a pound of Sugar, for the more Sugar you take, the fairer your Quinces will be, and the better and longer they will be preserved.

Conserve of
Quinces.

Take two gallons of fair water, and set it on the fire, and when it is luke-warm, beat the whites of five or six eggs; and put them into the water, and stir it well, and then let the water seeth, and when it riseth up all on a curd, then scum it off. Take quinces and pare them, and quarter them, and cut out the core: then take as many pound of your Quinces as of your Sugar, and put them into your liquor, and let it boyl till your liquor be as high coloured as French-wine; and when they be very tender, then take a fair new Canvas-cloth fair wash'd, and strain your Quinces through it with some of your liquor; (if they will not go through easily:) then if you will make it very pleasant, take a little Musk, and lay it in Rose-water, and put it thereto, then take and seeth it untill it be of such substance, that when it is cold it will cut with a Knife; and then put it into a fair Box, and if you please lay Leaf-gold thereon.

 To keep Quinces
all the year.

Take all the Parings of your Quinces that you make your conserve withall, and three or four other Quinces, and cut them in pieces, and boyl the same parings, and the other pieces in two or three gallons of water, and so let them boyl till all the strength be sodden out of the same quinces and parings, and if any scum arise whilst it boyls, take it away; then let the said water run through a Strainer into a fair vessel, and set it on the fire again, and take your Quinces that you will keep, and wipe them clean, and cut off the uttermost part of the said Quinces, and pick out the Kernels and cores as clean as you can, and put them into the said liquor, and so let them boyl till they be a little soft, and then take them from the fire, and let them stand till they be cold, then take a little Barrel, and put into the said Barrel the water that your Quinces be sodden in; then take up your Quinces with a Ladle, and put them into your Barrel, and stop the Barrel close, that no Air come into them, till you have occasion to use them; and be sure to take such Quinces as are neither bruised nor rotten.

Take

Take of the best sugar, and when it is beaten, searfe it very fine Fine Ginger
Cakes. and of the best Ginger, and Cinnamon; then take a little Gum-dragon, and lay it in Rose-water all night, then pour the water from it, and put the same with a little white of an egg well beaten into a brasse mortar, the sugar, ginger, cinnamon, and all together, and beat them together till you may work it like paste; then take it and drive it forth into cakes, and print them, and lay them before the fire, or in a very warm stove to bake. Or otherwise, take Sugar and Ginger, (as is before said) cinnamon and gum-dragon excepted, instead whereof, take only whites of Eggs, and so do as was before shewn you.

Take curds, the paring of Lemons, of Oranges, or Pome-citrons, or indeed any half ripe green fruit, and boyl them till they be tender in sweet wort; then make a sirrup in this sort, take three pounds of Sugar, and the whites of four eggs, and a gallon of water, then swing and beat the water and the eggs together, and then put in your Sugar, and set it on the fire, and let it have and easie fire, and so let it boyl six or seven walmes, and then strain it through a cloth, and set it on again till it fall from the spoon, and then put it into the rinds or fruits To make
Suckets.

Take a quart of Honey clarified, and seeth it till it be brown, Course Ginger
bread. and if it be thick, put to it a dish of water: then take fine crums of white bread grated, and put to it, and stirre it well, and when it is almost cold, put to it the powder of Ginger, Cloves, Cinnamon, and a little Licoras and Anniseeds: then knead it, and put it into a mould and print it; some use to put to it also a little Pepper, but that is according unto taste and pleasure.

Dissolve sugar, or sugar-candy in Rose-water, boile it to an height, put in your roots, fruits or flowers, the syrup being cold, then rest a little; after take them out, and boyl the sirrup again, then put in more roots, &c. then boyl the syrup the third time to an hardness, putting in more Sugar, but not Rose-water. put in the roots, &c. the syrup being cold, and let them stand till they candy. To candy any
root, fruits, or
flowers.

Thus having shewed you how to preserve, conserve, candy, & make pasts of all kinds, in which four heads consists the whole Ordering of
Banquets. Art of banquetting dishes; I will now proceed to the ordering

or setting forth of a banquet, wherein you shall observe that March-panes have the first place, the middle place, and last place; your preserved fruits shall be disht up first, your pasts next, your wet suckets after them, then your dried suckets, then your Marmalades, and Corinates, then your Comfets of all kinds; Next your Pears, Apples, Wardens, bakt, raw, or roasted, and your Oranges and Lemons sliced; and lastly your Wafers-cakes. Thus you shall order them in the closet; but when they goe to the Table, you shall first send forth a dish made for shew only, as Beast, Bird, Fish, Fowl, according to invention: then your March-pane, then preserved Fruit, then a Past, then a wet sucket, then a dry sucket, Marmalade, comfets, apples, pears, wardens, Oranges, and Lemons sliced, and then wafers, and another dish of preserved fruits, and so consequently all the rest before, no two dishes of one kind, going or standing together, and this will not only appear delicate to the eye, but invite the appetite with the much variety thereof.

Ordering of
great Feasts
and proportion
of expence.

Now we have drawn our *House-wife* into these severall Knowledge of Cookery, in as much as in her is contained all the inward Offices of Houshold, we will proceed to declare the manner of serving and setting forth of meat for a great Feast, and from it derive meaner, making a due proportion of all things; for what availes it our good *House-wife* to be never so skillfull in the parts of Cookery, if she want skill to marshall the dishes, and set every one in his due place, giving precedency according to fashion and Custome. It is like to a Fencer leading a band of men in a rout, who knows the use of the weapon, but not how to put men in order. It is then to be understood, that it is the Office of the Clerk of the Kitchen, whose place our *House-wife* must many times supply) to order the meat at the Dresser, and deliver it unto the Sewer, who is to deliver it to the Gentlemen, and Yeomen-waiters to bear to the Table. Now because we allow no Officers but our *House-wife*, to whom we only speak to this Book, she shall first marshall her Sallets, delivering the Grand Sallet first; which is evermore compound: then green Sallets, then boyled Sallets, then some smaller compound Sallets. Next unto Sallets, she shall deliver forth all her Fricases, the simple first, as Collops, Rashers, and such like, then

then compound Fricases; after them all, her boyled meates in their degree, as simple broths, stewed-broths, and the boylings of sundry Fowles. Next them, all sorts of Roast-meates, of which the greatest first, as chine of Beef, or surloine, the Jigget or legs of Mutton, Goose, Swan, Veale, Pig, Capon, and such like. Then bak'd meates, the hot first, as Fallow-Deer in Pasty, Chickens, or Calves foot pye and Douset. Then cold bak'd meates, Pheasant, Partridges, Turkey, Goose, Wood-cock, and such like. Then lastly, Carbonadoes, both simple & compound. And being thus Marshall'd from the Dresser, the Sewer upon the placing them on the Table, shall not set them down as he received them, but setting the Sallets extravagantly about the Table, mix the Fricases about them, then the boyld meates amongst the Fricases, roast meates amongst the boyld, baked meates amongst the roast, and Carbonadoes amongst the bak'd, so that before every Trencher may stand a Sallet, a Fricase, a boyld meat, a roast meat, a bak'd meat, and a Carbonado, which will both give a most comely beauty to the Table, and very great contentment to the Guests. So likewise in the second course, she shall first preferre the lesser Wild-fowl, as Mallard, Teyl, Snipe Plover, Wood-cock, and such like: then the lesser Land-fowl, as Chicken, Pidgeons, Partridge, Raile, Turkey Chickens, young Pea-hens, and such like.

Then the great Wild-fowl, as Bittern, Hearn, Shoveler, Crane, Bustard, and such like. Then the greater Land-fowls, as Peacocks, Pheasant, Puets, Gulls, and such like. Then hot bak'd meates, as Marrow-bone pye, Quince-pye, Florentine, and Tarts.

Then cold bak'd meates, as Red Deer, Hare-pye, Gammon of Bacon-pye, Wild-bore, Roe-pye, and such like, and these also shall be marshal'd at the Table as the first course, not one kind all together, but each severall sort mixt together, as a lesser Wild-fowle, and a lesser Land-fowle, a great Wild-fowle, and a great Land-fowle, a hot bak'd meat and a cold; and for made dishes and Quelquechoses, which rely on the invention of the Cook, they are to be thrust in into every place that is empty, and so sprinkled over all the Table: and that is the best method for the extraordinary great Feasts of

Princes. But in case it be for much more humble men, then lesser care and fewer dishes may discharge it: Yet before I proceed to that lower rate, you shall understand that in these great Feasts of Princes, though I have mentioned nothing but Flesh, yet is not Fish to be exempted; for it is a beauty and an honour unto every Feast, and is to be placed amongst all the several services, as thus; amongst your Sallets, all sorts of soufed fish that lives in the fresh water; amongst your Fricases all manner of fryed fish; amongst your boyld meats, all fish in broths; amongst your rost meats, all fish served hot, but dry; amongst the bak'd meats, sea-fish that is soufed, as Sturgeon, and the like; and amongst your Carbonadoes fish that is broyld. As for your second Course, to it belongeth all manner of shell-fish, either in the shell, or without; the hot to go up with the hot meat, and the cold with the cold.

And thus shall the Feast be Royall, and the Service Worthy.

Now for a more humble Feast, or an ordinary proportion which any good man may keep in his Family, for the entertainment of his true and worthy friends, it must hold limitation with his provision, and the season of the year; For Summer affords what Winter wants, and Winter is Master of that, which Summer can but with difficulty have: it is good then for him that intends to Feast, to set down the full number of his full dishes, that is, dishes of meat that are of substance, and not empty, or for shew; and of these sixteen is a good proportion for one course unto one messe, as thus, for example; First, a shield of Brawn with mustard, Secondly, a boyld Capon, Thirdly, a boyld piece of Beef, Fourthly, a chine of Beef roasted, Fifthly, a Neats tongue roasted, Sixthly, a Pig roasted, Seventhly, Chewets bak'd, Eighthly, a Goose roasted, Ninthly, a Swan roasted, Tenthly, a Turkey roasted, the Eleventh, a haunch of Venison roasted, the Twelfth a Pasty of Venison, the Thirteenth, a Kid with a pudding in the belly, the Fourteenth, an Olive-pye, the Fifteenth, a couple of Capons, the Sixteenth, a Custard or Dousets. Now to these full dishes may be added Sallets, Fricases, Quelquechofes, and de-

devise paste, as many dishes more which make the full service no less then two and thirty dishes which is as much as can conveniently stand on one Table, and in one mess; and after this manner you may proportion both your second and third course, holding fulness in one half of the dishes, and shew in the other, which will be both frugal in the spender, contentment to the guest, and much pleasure and delight to the beholders. And thus much touching the ordering of great feasts, and ordinary contentments.

CHAP. III.

Of Distillations, and their vertues, and of Perfuming.

When your English House-wife is exact in these Rules before rehearsed, and that she is able to adorn and beautifie her Table, with all the vertuous illustrations meet for her knowledge; she shall then fort her mind to the understanding of other Housewisely secrets, right profitable and meet for her use, such as the want thereof may trouble her when need or time requires.

Therefore first I would have her furnish her self of very good Stills, for the Distillation of all kinds of Water, which Stills would either be of Tin, or sweet Earth, and in them she shall distill all sorts of Waters meet for the health of her Household, as Sage water, which is good for all Rheums, and Collicks; Raddish water, which is good for the stone; Angelica water good against infection: Celandine water for sore eyes: Vine water for itchings; Rose water, and Eye bright water for dimme sights; Rosemary water for Fistulaes: Treacle water for mouth Cankers; Water of Cloves for the pain in the Stomach: Saxifrage water for Gravel & hard Urine, Allom water for old Ulcers, and a world of others, any of which will last a full year at the least. Then she shall know that the best waters for the smoothing of the skin, & keeping the face delicate & amiable, are those which are distilled, from Beanflowers, from Strawberries, from Vine leaves, from Goats-milk, from Asses milk, from the whites of Eggs, from the flowers

Of the nature
of Waters.

flowres of Lillies, from Dragons, from Calves feet, from bran, or from yelks of Eggs, any of which will last a year or better.

Additions to
distillations.
To distill wa-
ter of the co-
lour of the
herb or flower
you desire.
To make A-
qua vitæ.

First distill your water in a stillatory, then put it in a glasse of great strength, and fill it up with these flowers again (whose colour you desire) as full as you can, and stop it, and set it in the stillatory again, and let it distill, and you shall have the colour you distill.

Take of Rosemary flowers two handfulls, of Marjerom, Winter favory, Rosemary, Rue, unset Time, Germander, Ribwort, Harts-tongue, Mousere, white Wormwood, Bugloss, Red Sage, Liver-wort, Hoar-hound, fine Lavender, Hyssop-crops, Penny-royal, Red fennel, of each of these one handfull; of Elicampane roots, clean pared and sliced, two handfulls; Then take all these aforesaid and shred them, but not wash them, then take four gallons and more of strong Ale, and one gallon of Sack lees, and put all these aforesaid hearbs shred into it, and then put into it one pound of Lycoras bruised, half a pound of Anniseeds clean sifted and bruised, and of Mace and Nutmegs bruised of each one ounce: then put all together into your stilling pot, close covered with Rye paste, and make a soft fire under your pot, and as the head of the Limbeck heateth, draw out your hot water and put in cold, keeping the head of your Limbeck still with cold water, but see that your fire be not too rash at the first, but let your water come at leisure; and take heed unto your stilling, that your water change not white: for it is not so strong as the first draught is; and when the water is distilled, take a gallon glass with a wide mouth, and put therein a pottle of the best water and clearest, and put into it a pottle of *Rosa solis*, and half a pound of Dates bruised, and one ounce of grains, and half a pound of Sugar, half a pound of seed pearl beaten, three leaves of fine Gold, stir all these together well, then stop your glass, and set it in the Sun the space of one or two months, and then clarify it, and use it at your discretion: for a spoonfull or two at a time is sufficient, and the vertues are in-

Another excellent.

lent Aqua vitæ.

Fill a pot with red Wine clean and strong, and put therein the

the powders of Cammomile, Jilly flowrs, Ginger, Pellitory, Nutmeg, Gallengal, Spicknard, Quenebus, Grains of pure long pepper, black pepper, Cummin, Fennel seed, Smallage, Parsly, Sage, Rue, Mint, Calamint, and Horshow, of each of them alike quantity, and beware they differ not the weight of a dram under or above: then put all the powders above-said into the wine, and after put them into the distilling pot, and distill it with a soft fire, and look that it be well luted about with Rye paste, so that no fume or breath goe forth, and looke, that the fire be temperate: also receive the water out of the Lymbeck into a glass Vial. This water is called the water of Life, and it may be likened to Balm, for it hath all the vertues and properties which Balme hath. This water is cleer, and lighter than Rose-water, for it will fleet above all liquors, for if oyle be put above this water, it sinketh to the bottome, This water keepeth Flesh, and Fish, both Raw, and Sodden, in his own kind and state, it is good against Aches in the Bones, the Pox, and such like: neither can any thing kept in this water either rot or putrifie; it doth draw out the sweetnes, savour, and vertues of all manner of spices, roots and herbs that are wet or layd therein: it gives sweetnes to all manner of water that is mixt with it, it is good for all manner of cold sicknesses, and namely for the Pallie or trembling joynts, and stretching of the sinews; it is good against the cold gout, and it maketh an old man seem young, using to drink it fast ng, and lastly, it fretteth away dead flesh in wounds, and killeth the Cancer.

Take Rosemary, Thyme, Hyssop, Sage, Fennel, Nep, roots of Elicampane, of each an handfull, of Marjerom and Penny-Royall of each half a handfull, eight slips of red Mint, halie a pound of Lycoras, half a pound of Anniseeds, and two Gallons of the best Ale that can be brewed, wash all these herbs clean, and put into the Ale, Licoras, Anniseeds, and herbs into a clean brass pot, and set your Limbeck thereon, and paste it round about that no ayr come out, then distill the water with a gentle fire, and keep the Limbeck coole above, not suffering it to run too fast; and take heed when your water

To make Aqua
composita.

changelth

changeth colour, to put another glass under, and keep the first water for its most precious, and the later water keep by it selfe and put it into your next pot, and that shall make it much better.

A very principal Aqua-composita.

Take of Balm, of Rosemary flowers, tops and all, of dried Red Rose leaves, of Penny-royal, of each of these a handfull, one root of Elicampane, the whitest that can be got, three quarters of a pound of Lycoras, two ounces of Cinnamon, two drams of great Maec, two Drams of Galengal, three drams of Coriander seeds, three drams of Carraway seeds, two or three Nutmegs cut in four quarters, an ounce of Anni-seeds, a handful of borage, you must chuse a fair Sunny day to gather the herbs in : you must not wash them, but cut them in funder, and not too small; then lay all your herbs in soufe all night and a day, with the spices grossly beaten or bruised, and then distill it in order aforesaid: this was made for a learned Physitians own drinking.

To make the Imperial water.

Take a gallon of Gascoine Wine, Ginger, Galengall, Nutmegs, Grains, Cloves, Anniseeds, Fennel-seeds, Carraway seeds, of each one dram, then take Sage, Mint, Red roses, Thyme, Pellitory, Rosemary, Wild-time, Camomil and Lavender, of each a handfull, then bray the spices small, and the herbs also, & put all together into the Wine, and let it stand so twelve hours, stirring it so divers times, then distill it with a Limbeck, & keep the first water, for it is the best : of a Gallon of Wine you must not take above a quart of Water: this Water comforteth the Vitall spirits, and helpeth the inward diseases that come of cold, as the pallie, the contraction of sinews ; also it killeth worms, and comforteth the stomach, it cureth the cold Dropisie, helpeth the stone, the stinking breath, and maketh one seeme young.

To make Cinnamon water.

Take a pottle of the best Sack, and half a pint of Rose-water, a quarter and half a pound of good Cinnamon well bruised but not small beaten, distill all these together in a Glass-still, but you must carefully look to it, that it boyl not over hastily, and attend it with cold wet cloths to cool the top of the still if the water should offer to boyl too hastily. This water is very Sovereign for the stomach, the head, and all the inward

inward parts, it helps Digestion, and comforteth the vital spirits.

1. Take Fennel, Rue, Vervine, Endive, Betony, Germander, Red Roses, *Capillæ Veneris*, of each an Ounce; stamp them, and keep them with White-wine a day and a night, and distill Water of them, which water will divide in three parts: the first Water you shall put in a glass by it self, for it is more precious than Gold, the second as Silver, and the third as Balm, and keep these three parts in Glasses: this Water you shall give the Rich for Gold, to meaner for Silver, to poor men for Balm. This Water keepeth the sight in cleareness, and purgeth all gross humors.

Six most precious waters which Hippocrates made & sent to a Queen sometimes living in England.

2. Take *Sal-gemme* a pound, and lap it in a green Dock-leaf, and lay it in the fire till it be well rosted, and wax white; then put it in a Glass against the Air a night, and on the morrow it shall be turned to a white water like unto Chrystal, keep this water well in a Glass, and put a drop into the eye, and it shall cleanse and sharp the sight. It is good for any evil at the heart, for the Morpew and Canker in the mouth, and for divers other evils in the body.

3. Take the roots of Fennel, Parsly, Endive, Betony, of each an ounce, and first wash them well in luke-warm water, and bray them well with White-wine a day and a night, and then distill them into water. This Water is more worthy then Balme; it preserveth the sight much, and cleanseth it of all filth, it restraineth tears, and comforteth the Head, and avoideth the Water that cometh through the pain of the Head.

4. Take the seeds of Parsley, Achannes, Vervine, Carawayes, and Centaury, of each ten Drams, beat all these together, and put it in warm water a day and a night, and put it in a vessel to distill. This water is a precious water for all sore eyes, and very good for the health of Mans or Womans body.

5. Take Limmel of Gold, Silver, Lattin, Copper, Iron, Steel, and Lead: and take Litharge of Gold and Silver, take Calamint, and Columbine, and steep all together, the first day in the Urine of a man-child, that is between a day and a

night; the second day in White-wine; the third day in the juice of Fennel; the fourth day in the White of Eggs; the fifth day in Womans milk that nurseth a man-child; the sixth day in red Wine; the seventh day in Whites of Eggs; and upon the eighth day bind all these together, and distill the Water of them, and keep this water in a vessel of Gold or Silver. The virtues of this Water are these: First, it expelleth all Rheums, and doth away all manner of sickness from the Eyes, and wears away the Pearl, Pin, and Web: it draweth again into his own kind the Eye-lids that have been bleared, it easeth the ach of the head, and if a man drink it, it maketh him look young even in old Age; besides a world of other most excellent vertues.

6. Take the Gold-smith's stone, and put it into the fire, till it be red hot, and quench it in a Pint of White-wine, and do so nine times, and after grind it, and beat it small, and cleanse it as clean as you may, and after set it in the Sun with water of Fennel distilled, and Vervine, Roses, Celandine, and Rue, and a little *Aqua vite*; and when you have sprinkled it in the water nine times, put it then in a vessel of Glas, and yet upon a reversion of the Water distill it, till it passe over the Touch four or five Inches; and when you will use it, then stir it all together, and then take up a drop with a Feather, and put it on your Nail, and if it abide, it is fine and good: then put it into the Eye that runneth, or anoint the head with it if it ake, and Temples, and believe it, that of all Waters this is the most precious, and helpeth the sight, or any pain in the head.

The vertues of
several waters.

The water of Chervile is good for a sore mouth.

The water of Calamint is good for the Stomach.

The Water of Plantane is good for the flux, and the hot Drop sic.

Water of Fennel is good to make a fat body small, and also for the Eyes.

Water of Violets is good for a man that is sore within his body, and for the Reins, and for the Liver.

Water of Endive is good for the Drop sic, and for the Jaundice and the stomach.

Waters

Water of Borage is good for the stomach, and for the *Iliac* *passio*, and many other sicknesses in the body.

Water of both Sages is good for the Palsie.

Water of Betony is good for old age, and all inward sicknesses.

Water of Radish, drunk twice a day, at each time an Ounce, or an ounce and a half, doth multiply and provoke Lust, and also provoketh the terms in women.

Rosemary water (the face washed therein both morning and night) causeth a fair and clear countenance; also the head washed therewith, and let dry of it self, preserveth the falling of the Hair, and causeth more to grow: also two ounces of the same drunk, driveth Venome out of the body in the same sort as Methridate doth; the same twice or thrice drunk at each time half an ounce, rectifieth the mother, and it causeth women to be fruitful. When one maketh a Bath of this Decoction, it is called the Bath of Life: the same drunk, comforteth the heart, the brain, and the whole body, and cleanseth away the spots of the face; it maketh a woman look young, and causeth women to conceive quickly, and hath all the virtues of Balm.

Water of Rew, drunk in a morning four or five days together, at each time an ounce, purifieth the flowers in women: the same Water drunk in the morning fasting, is good against the griping of the bowels, and drunk at morning, and at night, at each time an Ounce, it provoketh the Terms in women.

The Water of Sorrel drunk, is good for all burning and pestilent Feavers, and all other hot sicknesses: being mixt with Beer, Ale, or Wine, it slaketh the Thirst: it is also good for the Yellow Jaundice, being taken six or eight dayes together: it also expelleth from the Liver, if it be drunk, and a Cloth wet in the same, and a little wrung out, and so applied to the right side over against the Liver, and when it is dry, then wet another, and apply it, and thus do three or four times together.

Lastly, the water of Angelica is good for the head, for inward infection either of plague or pestilence, it is very sovereign

veraigen for sore breasts; also the same Water being drunk of twelve or thirteen dayes together, is good to unlade the stomach of gross humours and superfluities, and it strengtheneth and comforth all the universal parts of the body. And lastly, it is a most soveraign medicine for the Gout, by bathing the diseased members much therein.

Now to conclude and knit up this Chapter, it is meet that our House wife know that from the eighth of the Kalends of the Month of *April*, unto the eighth of the Kalends of *July*, all manner of herbs and leaves are in that time most in strength, and of the greatest vertue to be used, and put in all manner of Medicines; also from the eighth of the Kalends of *July*, unto the eighth of the Kalends of *October*, the stalks, stems, and hard branches of every herb and plant is most in strength to be used in Medicines; and from the eighth of the Kalends of *October*, unto the eighth of the Kalends of *April*, all manner of roots of herbs and plants are the most of strength and vertue to be used in all manner of Medicines.

An excellent
water for per-
fume.

To make an excellent sweet Water for Perfume, you shall take of Basil, Mints, Marjerom, Corn-flag-roots, Hyssop, Savory, Sage, Balme, Lavender, and Rosemary, of each one handfull; of Cloves, Cinnamon, and Nutmegs, of each half an ounce; then three or four Pome-citrons cut into slices, infuse all these into *Danask-Rose-water*, the space of three dayes, and then distill it with a gentle fire of Char-coal, then when you have put it into a very cleane glass, take of fat Musk, Civet, and Amber-greece, of each the quantity of a Scruple, and put it into a rag of fine Lawn, and then hang it within the water. This being burnt either upon a hot pan, or else boyled in perfuming-pans with Cloves, Bay-leaves, and Lemon-pills, will make the most delicate perfume that may be, without any offence, and will last the longest of all other perfumes, as hath been found by Experience.

To perfume
Gloves.

To perfume Gloves excellently, take the oyl of sweet Almonds, oyl of Nutmegs, oyl of Benjamin, of each a Dram, of Amber-greece one Grain, fat Musk two Grains: mix them all together, and grind them upon a Painters Stone, and then anoint the Gloves therewith, yet before you anoint them

them, let them be dampishly moistned with Damask Rose-water.

To perfume a Jerkin well, take the oyl of Benjamin a penny-worth, oyl of Spike and oyl of Olives, half pennyworths of each, and take two Spunges, and warm one of them against the fire and rub your Jerkin therewith, and when the oyl is dried take the other Sponge and dip it in the oyl, and rub your Jerkin therewith till it be dry, then lay on the Perfume before prescribed for Gloves.

To perfume a Jerkin.

To make very good Washing-balls, take Storax of both kinds, Benjamin, *Calamus Aromaticus*, Labdanum, of each alike, and bray them to powder with Cloves and Orris; then beat them all with a sufficient quantity of Sope till it be stiff, then with your hand you shall work it like Paste, and make round balls thereof.

To make Washing-balls.

To make Musk-balls, take Nutmegs, Mace Cloves, Saffron and Cinnamon, of each the weight of two pence, and beat it to fine powder, of Mastick the weight of two pence half penny, of Storax the weight of six pence, of Labdanum the weight of ten pence; of Ambergreece the weight of six pence; and of Musk four grains, dissolve and work all these in hard sweet Sope till it come to a stiff Paste, and then make Balls thereof.

To make a Musk-ball.

To make a good Perfume to burn, take Benjamin one ounce, Storax, Calamint two ounces, of Mastick white, Ambergreece, burn, of each one ounce; Ireos, *Calamus Aromaticus*, Cypress wood, of each half an ounce, of Camphire one scruple, Labdanum one ounce; beat all these to powder, then take of Sallow Charcole six ounces, of liquid Storax two ounces, beat them all with *Aqua vite*, and then you shall rowl them into long round Rowls.

A Perfume to burn.

To make Pomanders, take two penny-worth of Labdanum, two penny-worth of Storax liquid, one penny-worth of *Calamus Aromaticus*, as much Balm, halt a quarter of a pound of fine wax, of Cloves and Mace two penny-worth, of liquid Aloes three penny-worth, of Nutmegs eight penny worth, and of Musk four grains: beat all these exceedingly together, till they come to a perfect substance, then mould it in any fashion you please, and dry it.

To make Pomanders.

To

To make Vinegar.

To make excellent strong Vinegar, you shall brew the strongest Ale that may be, and having tunned it in a very strong vessel, you shall set it either in your Garden or some other safe place abroad, where it may have the whole Summers day Sun to shine upon it, and there let it lye till it be extream fower; then, into a Hogthead of this Vinegar put the leaves of four or five hundred Damask roses, and after they have layen for the space of a month therein, house the Vinegar, and draw it as you need it.

To make dry Vinegar.

To make Vinegar which you may carry in your Pocket, you shall take the blacks of green Corn, either Wheat or Rye, and beat it in a Mortar with the strongest vinegar you can get, till it come to pass, then roul it into little Balls, and dry it in the Sun till it be very hard, then when you have occasion to use it cut a little piece thereof, and dissolve it in Wine, and it will make a strong Vinegar

To make Verjuice.

To make Verjuice, you shall gather your Crabs as soon as the Kernels turn black, and having laid them a while in a heap to sweat together, take them and pick them from the stalks, blacks and rottenness: then in long Troughs with Beetles for the purpose, crush and break them all to mass, then make a bag of course Hair-cloth as square as the Press, and fill it with the crushed Crabs, then put it into the Press, and press it, while any moisture will drop forth, having a clean vessel underneath to receive the liquor; this done, tun it up in sweet Hogheads, and to every Hoghead put half a dozen handfuls of Damask rose-leaves, and then bung it up, and spend it as you shall have occasion.

Additions to conceited secrets.

Many other pretty secrets there are belonging unto curious *Housewives*, but none more necessary than these already rehearsed except such as shall hereafter follow in their proper places.

Take of Orris six ounces, of Damask Rose-leaves as much, of Marjerom and sweet Basil of each an ounce, of Cloves two ounces, yellow Sanders two ounces, of Citron pills seven drams, of *Lignum Aloes* one ounce, of Benjamin one ounce, of Storax one ounce, of Musk one dram; bruise all these, and put them into a bag of Silk or Linnen, but Silk is the best.

To make sweet powder for bags.

Take of Orris four ounces, of Gallamin's one ounce, of Citis half an ounce, of Rose leaves dried two handfuls, of dried Marjerom

jerom one handfull, of Spike one handfull, Cloves one ounce, Benjamin and Rax of each two ounces, of white Sanders, and yellow of each one ounce, beat all these into a gross powder, then put to it of Musk a dram, of Civet half a dram, and of Ambergrece half a dram; then put them into a Taffety Bag, and use it.

To make sweet bags.

Take of Bay-leaves one handfull, of red Roses two handfulls, of Damask-roses three handfulls, of Lavender four handfulls, of Basil one handfull, Marjerom two handfulls, of Camomile one handfull, of the young tops of Sweet bryer two handfulls, of Dandelion, Tansy two handfulls, of Orange peels six or seven ounces, of cloves and Mace a groats worth: put all these together in a Pottle of new Ale in corns, for the space of three dayes, shaking it every day three or four times; then distill it the fourth day in a Still with a continual soft fire, and after it is distilled, put into it a grain or two of Muske.

How to make sweet water.

Take a quart of *Malmsey lees*, or a quart of *Malmsey* simply, one handfull of Marjerom, of Basil as much, of Lavender four handfulls, Bay-leaves one good handfull, Damask Rose-leaves four handfulls, and as many of Red, the Peels of six Oranges, or for want of them one handfull of the tender leaves of Wall-nut-trees, of Benjamin half an ounce, of *Calamus Aromaticus* as much, of Camphire four drams, of Cloves one ounce, of B.L. damum half an ounce; then take a Pottle of running water, and put in all these spices bruised into your water and *Malmsey* together, in a close stopped pot with a good handfull of Rosemary, and let them stand for the space of six dayes: then distill it with a soft fire: then set it in the Sun sixteen dayes with four grains of Musk bruised. This quantity will make three quarts of Water. *Probatum est.*

A very rare and pleasant Damask-water.

Take and brew very strong Ale, then take half a dozen Gallons of the first running, and set it abroad to cool, and when it is cold put yest into it, and head it very strongly; then put it up in a firkin, and distill it in the Sun, then take four or five handfulls of Beans, and parch them in a Pan till they burst: then put them in as hot as you can into the Firkin, and stop it with a little Clay about the Bung-hole; then take a handfull of clean Rye-Leaven, and put in the firkin; then take a quantity of Barberries, and bruise and strain them into the Firkin, and a good

To make the best Vinegar.

good handful of Salt, and let them lye and work in the Sun from *May* till *August*; then having their full strength, take Rose leaves, and clip the white ends off, and let them dry in the Sun, then take Elder-flowers, and pick them and dry them in the Sun, and when they are dry put them in bags, and keep them all the Winter: then take a Pottle-pot, and draw forth a Pottle out of the Ferkin into the Pottle, and put a handful of the red Rose leaves, and another of the Elder-flowers into the Pottle, and then hang it in the Sun, where you may occupy the same, and when it is empty, take out all the leaves, and fill it again as you did before,

To perfume
Gloves.

Take Angelica-water, and Rose-water, and put into them the powder of Cloves, Ambergreece, Musk, and *Lignum Aloes*, Benjamin, and *Calamus Aromaticus*: boyl these till half be consumed: then strain it and put your Gloves therein; then hang them in the Sun to dry, and turn them often: and thus three times, wet them and dry them again: or otherwise, take Rose-water, and wet your Gloves therein, then hang them up till they be almost dry; then take half an Ounce of Benjamin, and grind it with the oyl of Almonds, and rub it on the Gloves till it be almost dried in: then take twenty Grains of Ambergreece, and twenty Grains of Musk, and grind them together with oyl of Almonds, and so rub it on the Gloves and then hang them up to dry, or let them dry in your bosome, and so after use them at your pleasure.

CHAP. IV.

The ordering, preserving, and helping of all sorts of Wines, and first of the choice of sweet Wines.

I Do not assume to my self this knowledge of the Vintners Secrets, but I ingeniously confess, that one protest skilful in the Trade, having rudely written, and more rudely disclosed this Secret, and preferring it to the Stationer, it came to me to be published, which I have done, knowing that it is necessary, &c.

It is necessary, that our *English Housewife* be skilful in the Ordering, preserving, and curing of all sorts of Wines, because they be usual charges under her hands, and by the least neg-

neglect must turn the Husband to much loss: therefore to speak first of the election of sweet Wines, the must be carefull that her Malmseys be full Wines, pleasant, well hewed and fine: that *Bastard* be fat, and if it be tawny it skils not; for the tawney *Bastards* be always the sweetest. Muscadine must be great, pleasant and strong with a sweet scent, and with Amber colour. Sack if it be Seres (as it should be) you shall know it by the mark of a cork burned on one side of the bung, and they be ever full gage, and so are no other Sacks, and the longer they lye, the better they be.

Take a pleasant Butt of Malmsey, and draw it out a quarter and more; then fill it up with fat *Bastard* within eight gallons or thereabouts, and parel it with six Eggs, yelks and all, one handfull of bay salt, and a pint of conduit water to every parel, and if the Wine be of high colour, put in three gallons of new milk, but skim off the cream first, and beat it well: or otherwise, if you have a good Butt of Malmsey, and a good Pipe of *Bastardy*, you must take some empty Butt or Pipe, & draw thirty gallons of Malmsey, and as many of *Bastard*, and beat them all well together, and when you have so done, take a quarter of a pound of Ginger, and bruise it and put it into your vessel, then fill it up with Malmsey and *Bastard*: Or otherwise thus, if you have a pleasant Butt of Malmsey which is called Rale-mow, you may draw out of it forty Gallons; and if your *Bastard* be very faint, then thirty Gallons of it will serve to make it pleasant: then take four gallons of new milk, and beat it, and put it into it when it lacketh of twelve gallons of full, and then make your flavor.

Take an ounce of Corianders, of bay Salt, of Cloves, of each as much, one handfull of Savory: let all these be blended, and bruised together, and sow them close in a bagge, and take half a pint of Damask water, and lay your flavor into it, and then put it into your Butt, and if it be fine, give it a parel, and then fill it up, and let it lye till it fine: or else thus, take Coriander Roots a pennyworth, one pound of Anniseeds, one penny-worth in Ginger, bruise them together, and put them into a bag as before, and make your bag long and small, that it go in and

R r r

How to flavor
Muskadine.

out

out at the bung-hole, and when you do put it in, fasten it with a thread at the bung; then take a pint of the strongest Damask water and warm it lukewarme, then put it into the Butt, and then stop it close for two or three dayes at least; and then, if you please, you may set it abroach.

To apparel
Muskadine
when it comes
new to be fine
in twenty-four
hours.

Take seven whites of new laid Eggs, two handfulls of Bay-salt, and beat them well together, and put therein a pint of Sack or more, and beat them till they be as short as Snow; then over-draw the But seven or eight Gallons, and beat the Wine, and stirre the Lees, and then put in the parcel, and beat it, and so fill it up, and stop it close, and draw it on the morrow.

To make
white bastard.

Draw out of a Pipe of *Bastard* ten Gallons, and put to it five Gallons of new milk, and skimme it as before, and all to beat it with the parcel of eight whites of Eggs, and a handful of Bay-salt, and a pint of Conduit water, and it will be white and fine in the morning. But if you will make very fine *Bastard*, take a White wine Hoggs-head, & put out the Lees, and wash it clean, and fill it half full, and half a quarter, and put it to four Gallons of new milk, and beat it well with the whites of six Eggs, and fill them up with White wine and Sack, and it will be white and fine.

How to help
Bastard being
eager.

Take two Gallons of the best *flowed Honey*, and two Gallons of White wine, and boyl them in a fair pan, skimme it clean, & strain it through a fair cloth that there be no motes in it; then put to it one ounce of *Corianders*, and one ounce of *Aniseeds*, four or five *Orange-peels* dry and beaten to powder: let them lye three days: then draw your *Bastard* into a clean Pipe, then put in your honey with the rest, and beat it well: then let it lye a week, and touch it not, after draw it at your pleasure.

To make ba-
stard white,
and to rid a-
way Lags.

If your *Bastard* be fat and good, draw out forty Gallons, then you may fill it up with the Lags of any kind of white wines or Sacks; then take five Gallons of new milk, and first take away the Cream, then strain it through a clean cloth, and when your Pipe is three quarters full, put in your milk; then beat it very well, and fill it so, that it may lack fifteen Gallons, then

apparel

aparel it thus : take the whites onely of ten Eggs, and beat them in a fair tray with *Bay salt* and *Conduit water* ; then put it into the pipe and beat it well, and so fill it up, and let it stand open all night ; and if you will keep it any while, you must on the morrow stop it close, and to make the same drink like *Ossey*, give it this flaver : take a pound of *Anniseeds*, two pence in *Corianders*, two pence in *Grains*, two pence in long *Pepper*, and two pence in *Lycoras* ; brufe all these together : then make two bags of linnen cloth, long and small, and put your spices into them, and put them into the pipe at the bung, making them fast there with a thread, that it may sink into the Wine, then stop it close, and in two days you may broach it.

Take and draw him from his Lees, if he have any, and put the Wine into a *Malmsey Butt* to the Lees of *Malmsey*, then put to the *Bastard* that is in the *Malmsey but*, nigh three Gallons of the best *Wort* of a fresh tap, & then fill him up with *Bastard* or *Malmsey*, or *Cute* if you will ; then apparel it thus : First, *Parse him*, and beat him with a staff, and then take the whites of four new laid Eggs, and beat them with a handfull of salt till it be as short as *Moss*, and then put a pint of running water therein, and so fill the Pipe up full, and lay a little stone on the bung, and set it abroach within four and twenty hours, if you will.

A remedy for
bassard if it
prick.

For Sack that
stancie.

For Sack that
stancie and
is browne

To color of
red wine
white

For Sack that
stancie and
is browne

If you have a good But of *Malmsey*, and a But or two of *Sack*, that will not be drunke : for the *Sack* prepare some empty But or Pipe, and draw it more than half full of *Sack* ; then fill it up with *Malmsey*, and when your But is full, within a little, put into it three Gallons of *Spanish-Cute*, the best that you can get ; then beat it well : then take your Taster, and see that it be deep coloured ; then fill it up with *Sack*, and give it apparel, and beat it well ; the apparel is this : Take the yolks of ten Eggs, and beat them in a clean bason with a handfull of *Bay-salt*, and a quart of *Conduit-water*, and beat them together with a little piece of *Birch*, and beat it till it be as short as *Moss*, then draw five or six gallons out of your But ; then beat it again, and then fill it up, and the next day it will be ready

to be drawn : this aparel will serve both for *Muscadine*, *Bastard* and for *Sack*.

To shift Malmsey, and to rid away ill wines.

If you have two principal Butts of *Malmsey*, you may make three good Butts with your Laggs of *Claret* and *Sack*, if you put two gallons of red Wine in a Butt, it will save the more *Cute*: then put two or three gallons of *Cute*, as you see cause; and if it be *Spanish Cute*, two gallons will go further than five gallons of *Candy Cute*, but the *Candy Cute* is more naturall for the *Malmsey*: also one Butt of good *Malmsey*, and a Butt of *Sack* that hath lost his colour, will make two good Butts of *Malmsey*, with the more *Cute*; and when you have fill'd your butts within twelve gallons, then put in your *Cute*, and beate it half an hour and more: then put in your parel and let it lye.

If *Sack* want his colour.

First, parel him as you did the *Bastard*, and order him as shall be shewed you for the *white wine* of *Gascoign* with *milk*, and so set him abroach.

For *Sack* that tawny.

If your *Sack* have a strong Lee or taste, take a good sweet Butt, fair washed, and draw your *Sack* into it, and make unto it a parel, as you do to the *Bastard*, and beat it very well, and so stop up your Butt: and if it be tawny, take three gallons of new *milk*, and strain it clean, and put it into your *Sack*, then beat it very well, and stop it close.

For *Sack* that doth rape and is brown.

Take a fair empty Butt with the Lees in it, and draw your *Sack* into the same from his Lees fine: then take a pound of *Rice flower*, as fine as you can get, and four grains of *Campfire*, and put it into the *Sack*; and if it will not fine, give it a good parel, and beat it well: then stop it, and let it lye.

To colour sack or any white wine.

If any of your *Sacks* or *white Wines* have lost their colour, take three gallons of new *milk*, and take away the Cream: then over-draw your Wine five or six gallons, then put in your *milk* and beat it up, and the next day (if you will) you may set it abroach.

Draw him out in fresh Lee, and take three or four Gallons of *stone honey* clarified, and being cool, put it in, and parel it, with the yelks of four Eggs, whites and all, and beate it well,

well, and fill it up, and stop it close, and it will be pleasant and quick as long as it is in drawing.

Take three Gallons of white Honey, and two Gallons of Red Wine, boyle them together in a faire pan, and skim it that is four. cleane, and let it stand till it be fine and cold, then put it into your Pipe, yet nothing but the finest; then beat it well, and fill it up, and stop it close, and if your Alligant be pleasant and great, it will do much good, for that one Pipe will rid away divers.

There are two sorts of Rhenish wines, that is to say, *Elstertune* and *Barabant*: the *Elstertune* are the best, you shall know it by the Fat, for it is double hard, and double pinned; the *Barabant* is nothing so good, and there is not so much good to be done with them as with the other. If the Wines be good and pleasant a man may rid away a hoghead or two of white Wine, and this is the most vantage a man can have by them: and if it be slender and hard, then take three or four gallons of stone-honey, and clarifie it clean; then put into the honey, four or five gallons of the same Wine, and then let it seeth a great while, and put into it two pence in Cloves bruised, let them seeth together, for it will take away the scent of hony, and when it is sodden take it off, and set it by, till it be thorow cold; then take four gallons of milk and order it as before, and then put all into your Wine, and all to beat it; and (if you can) role it, for that is the best way: then stop it close, and let it lye, and that will make it pleasant.

The Wines that be made in *Burdeaux* are called *Gascoigne* Wine, and you shall know them by their hazel hoop, and they must be full gage, and sound Wines.

The Wines of the high Countries, and which are called high Country Wines, are made some thirty or fourty miles beyond *Bordeaux*, and they come not down so soon as the other, for if they do, they are all forfeited; and you shall know them ever by their hazel hoops, and the length gage lacks.

Then have you Wines that be called *Galloway*, both in Pipes and Hogheads, and be long, and lack two Cesterns in gage and a half, and the wines themselves are high coloured. Then there are other Wines which are called white Wine of *Angelle*, very

How to order
Rhenish wines

How to order
Rhenish wines

Of what coun-
tries wines
are by their
names.

very good Wine, and lacks little of gage, and that is also in pipes for the most part, and is quarter bound. Then there are *Rockell* wines, which are also in pipes long and slender: They are very small hedge wines, sharp in Taste, and of a pallid complexion. Your best Sacks are of *Seres* in *Spain*, your smaller of *Galicia* and *Portingall*, your strong Sacks are of the Islands of the *Canaries*, and of *Mallipo*, and your Muscadine and Malmseys are of many parts of *Italy*, *Greece*, and some special Islands.

Every Terte is in depth the middle of the knot in the midit.

The depth of every Hogthead is the fourth prick above the knot.

The depth of every Punccheon is the fourth prick next to the punchener.

The depth of every Sack-but is the four pricks next to the punccheon.

Notes of gaging of wines, oyls, and liquors.

The depth of the half Hogthead is at the lowest notch, and accounted one.

The depth of the half Terte is at the second notch, and is accounted two.

The depth of the half Hogthead and Pipe, is at the third notch, and accounted three.

The depth of the half Butt is at the fourth notch, and is accounted four.

A Gallon of Malmsbury, if he be full, is one hundred and twenty pence. The first gage is marked thus.

1. The first gage is marked thus.

It is for twelve pence a Gallon, the Tun is twelve pence, and the half Tun is six pence.

And Malmsbury and Rhenish wine are ten pence the Gallon, the Tun is ten pence, and the half Tun is five pence.

2. The half Sestern lacketh thus.

Eight pence the Gallon, is the Tun six pence, and the half Tun is three pence.

Five pence the Gallon, is the Tun four pence, and the half Tun is two pence.

Four pence the Gallon, is the Tun three pence, and the half Tun is one pence.

3. The whole Sestern lacketh thus.

Four pence the Gallon, is the Tun three pence, and the half Tun is one pence.

Three pence the Gallon, is the Tun two pence, and the half Tun is one pence.

2. The Sestern and half Lag.

Three pence the Gallon, is the Tun two pence, and the half Tun is one pence.

3. The two Sesterns thus.

Two pence the Gallon, is the Tun one pence, and the half Tun is half pence.

4. The two and half Sesterns, thus.

One pence the Gallon, is the Tun half pence, and the half Tun is quarter pence.

5. The two and half Sesterns, thus.

Half pence the Gallon, is the Tun quarter pence, and the half Tun is eighth pence.

The contents of all manner of Caskes, Wine, and other.

The contents of all manner of Caskes, Wine, and other.

The contents
of all manner
of Gascoine
Wine, and o-
thers.

A But of Malmsey, if he be full gage, is one hundred and twenty six gallons.

And so the Tun is two hundred and fifty two gallons. Every Sestern is three gallons.

If you sell for twelve pence a gallon, the Tun is twelve pound, twelve shillings.

And Malmsey and Rhenish wine at ten pence the gallon, is the Tun ten pound.

Eight pence the gallon, is the Tun eight pounds.

Six pence the gallon, is the Tun six pounds.

Five pence the gallon, is the Tun five pounds.

Four pence the Gallon, is the Tun four pounds.

Now for Gascoine Wine, there goeth four Hogheads to a Tun, and every Hoghead is sixty three gallons, the two hogheads one hundred twenty six gallons; and four hogheads are two hundred fifty two gallons; and if you sell for eight pence the gallon, you shall make of the Tun eight pounds, and so forth: look how many pence the gallons are, and so many pounds the Tun is.

Now for bastard, it is the same rate, but it lacketh of gage two Sesterns and a half, or three at a pipe, and then you must abate six gallons of the price, and so in all other wines.

To chuse Gascoine wines.

See that in your choice of Gascoine wines, you observe, that your Claret wines be faire coloured, and bright as a Ruby, not deep as an Amethyst; for though it may shew strength, yet it wanteth neatness: also let it be sweet as a Rose or a Violet, and in any case let it be short, for if it be long, then in no case meddle with it.

For your white Wines, see they be sweet and pleasant at the Nose, very short, clear and bright, and quicke in the Taste.

Lastly, for your Red Wine, provided that they be deep coloured, and pleasant, long, and sweet, and if in them or Claret wine be any default of colour, there are remedies enough to amend and repair them.

To remedy
Claret wine
that hath lost
his colour.

If your Claret wine be faint, and have lost his colour: then take a fresh Hoghead with his fresh Lees, which was very good wine, and draw your wine into the same; then stop
it

It close and right, and lay it a fore-take for two or three dayes, that the Lees may run through it: then lay it up till it be fine, and if the colour be not perfect, draw it into a Red-wine Hogthead, that is new drawn with the Lees, and that will colour of himself, and make him strong: Or take a pound of Turnsol or two, and beat it with a Gallon or two of Wine, and let it lye a day or two; then put it into your Hogthead, draw your Wine again, and wash your cloths; then lay it a fore-take all night, and roul it on the morrow, then lay it up, and it will have a perfect colour.

And if your Claret-wine have lost his colour, take a penny-worth of Damsens, or else black Bullesfes, as you see cause, and stew them with some Red-wine of the deepest colour, and make thereof a pound or more of syrup, and put it into a clean glass, and after into the Hogthead of Claret-wine: and the same you may likewise do unto red Wine if you please.

And if your White-wine be faint, and have lost his colour, if the Wine have any strength in it, take to a hogthead so much as you intend to put in, out of the said milk, and a handful of Rice beaten very well, and a little Salt; and lay him a fore-take all night, and on the morning lay him up again, and set it abroach in any wise the next Wine you spend, for it will not last long.

Take three Gallons of new Milk, and take away the Cream of it; then draw five or six gallons of Wine, and put your Milk into the hogthead, and beat it exceeding well, then fill it up, but before you fill it up, if you can, roul it; and if it be long and small, take half a pound of Roch-Allum finely beaten into powder, and put it into the the vessel, and let it lye.

Take and draw it into new Lees of their own nature, and then take a dozen of new Pippius, and pare them and take away the Cores, and then put them in; and if that will not serve, take a handful of the Oak of Jerusalem, and stamp it, then put it into your Wine, and beat it exceeding well, and it will not only take away the foulness, but also make it have a good scent at the Nose.

If your red Wine drink faint, then take a hogthead that Allegant hath been in with the Lees also, and draw your Wine
Sff into

A remedy for
White-wine
that hath lost
his colour.

For White-
Wine that
hath lost his
colour.

A remedy for
Claret that
drinks foul.

into it, and that will refresh it well, and make the Wine well coloured, or otherwise draw it close to fresh lees, and that will recover it again, and put to it three or four gallons of Allegant, and turn it on his lees.

If your Red Wine lack colour, then take out four gallons, and put in four gallons of Allegant, and turn him on his lees, and the bung up, and his colour will return and be fair.

Take a good Butt of Malmsey, and over-draw it a quarter or more, and fill him up with fat Bastard, and with Cute a gallon and more, then parrell him as you did your Malmsey.

If *Osey* com-
pleat hath lost
his colour.

You shall in all points dress him, as you did dress your Sack, or White Wine in the like case, and parrell him, and then set him abroad. And thus much touching Wines of all sorts, and the true use and ordering of them so far forth as belongeth to the knowledge and profit of our *English House-Wife*.

C H A P. V.

Of Wooll, Hemp, Flax, and Cloth, and dying of Colours, of each several substance, with all the knowledges belonging thereto.

Our *English House-wife*, after her knowledge of preserving and feeding her Family, must learn also how, out of her own endeavours, she ought to cloath them outwardly and inwardly: outwardly for defence from the cold and comeliness to the person; and inwardly, for cleanliness and neatness of the skin, whereby it may be kept from the filth of sweat or vermines, the first consisting of woollen cloth, the latter of linnen.

Of making
woollen cloth.

To speak then first of the making of woollen cloth, it is the office of a Husbandman at the shearing of his sheep, to bestow upon the House-wife such a competent proportion of Wooll, as shall be convenient for the clothing of his Family, which Wooll as soon as she hath received it, she shall open, and with a pair of sheers (the fleecelyng as it were whole before her) she shall

shall cut away all the course locks, pitch, brands, tard-locks, and other feltrings, and lay them by themselves for course Coverlids, or the like; then the rest so cleansed, she shall break into pieces, and toase it every lock by lock, that is, with her hands open, and so divide the wooll, as not in any part thereof may be feltred or close together, but all open and loose; then so much of the Wooll as she intends to spin white, she shall put by it self, and the rest which she intends to put into colours, she shall weigh up, and divide into several quantities, according to the proportion of the Web which she intends to make, and put every one of them into particular bags made of Netting, with Tallies, or little pieces of wood fixed unto them, with privy marks thereon, both for the weight, the colour, and the knowledge of the same Wooll, when the first colour is altered: This done, she shall if she please send them unto the Dyers, to be died after her own fancy; yet forasmuch as I would not have our *English House-wife* ignorant in any thing meet for her knowledge, I will shew her here, before I proceed any further, how she shall dye her Wooll her self, into any colour meet for her use.

First then to dye Wooll black, you shall take two pounds of Galls, and bruise them; then take half so much of the best green black Copperas, and boyl them both together in two gallons of running water: then shall you put your Wooll therein, and boyl it; so done, take it forth and dry it.

If you will dye your Wooll of a bright hair colour; first boyl your Wooll in Allum and Water, then take it forth, and when it is cold, take Chamber-lye, and Chimney-foot, and mixing them together well, boyl your Wooll again therein, and stir it exceeding well about, then take it forth, and lay it where it may conveniently dry.

If you will dye your Wooll into a perfect Red colour, set on a pin full of water; when it is hot, put in a peck of Wheat bran, and let it boyl a little, then put it into a Tub, and put twice as much cold water unto it, and let it stand until it be a week old: having done so, then shall you put to ten pounds of Wooll, a pound of Allum; then heat your Liquor again, and put in your Allum, and so soon as it is melted, put in your Wooll,

and let it boyl the space of an hour : then take it again, and set on more Bran and Water.

Then take a pound of Madder, and put in your Madder when the Liquor is hot ; when the Madder is broken, put in the wool and open it, and when it cometh to be very hot, then stir it with a staff, and then take it out, and wash it with fair water ; then set on the Pan again with fair water, and then take a pound of Saradine buck, and put it therein, and let it boyl the space of an Egg seething ; then put in the wool, and stir it three or four times about, and open it well, and after dry it.

To dye Wool blew. To die wool blew, take good store of old Chamber-lye, and set it on the fire, then take half a pound of blew Neal, Byse or Indico, and beat it small in a Mortar, and then put it into the Lye, and when it seeths put in your Wool.

To dye a Puke. To die wool of a Puke colour, take Galls, and beat them very small in a Mortar, put them into fair seething water, and boyl your Wool or your Cloth therein, and boyl them the space of half an hour ; then take them up, and put in your Copperas into the same liquor, then put in your Wool again, and doing this once or twice, it will be sufficient.

To dye a Cinder-colour. And if you will die your wool of a Cinder-colour, which is a very good colour, you shall put your Red wool into your Puke Liquor, and then it will fait less to be of a Cinder-colour.

If you will die your wool either green or yellow, then boyl your Wood-ward in a fair water, then put in your Wool or Cloth, and the wool which you put in white, will be yellow, and that wool which you put in blew will be green, and all this with one Liquor, provided that each be first boyled in Allom.

To dye green or yellow. When you have thus dyed your Wool into those several colours meet for your purpose, and have also dyed it well ; then you shall take it forth, and toase it over again as you did before, for the first toasting was to make it receive the colour or Die ; this second is to receive the oyl, and make it fit for spinning ; which as soon as you have done, you shall mix your colours together : whererein you are to note, that the best Medly is that which is

com-

compounded of two colours onely, as a light colour and a dark : for to have more is but confusion, and breeds no pleasure but distraction to the sight : therefore for the proportion of your mixtures, you shall ever take two parts of the darker colour, and but a third part of the light. As for example, your Web contains twelve pound, and the colours are red and green : you shall then take eight pound of the green wool, and but four pound of the red ; and so of any other colours where there is difference in brightness.

Mixing of three colours.

But if it be so that you would needs have your cloth of three Colours, as of two dark and one light, or two light and one dark : As thus, you will have Crimson, Yellow, and Puke : you shall take of the Crimson and Yellow, of each two pounds, and of the Puke eight pounds ; for this is two light colours to one dark : but if you will take a Puke, a Green, and an Orange Tawny, which is two dark, and one light ; then you shall take of the Puke and green, and the Orange tawny of each a like quantity, that is to say, of either four pounds. When you have equally divided your portions, then you shall spread upon the ground a Sheet, and upon the same first lay a thin Layr or bed of your darker colour, all of one even thickness, then upon the same Layr lay another much thinner of the brighter quantity, being so near as you guess it hardly half so much as the darker ; then cover it over with another Layr of the sad colour or colours again ; then upon it another of the bright again ; and thus Layr upon Layr till all your Wooll be spread ; then beginning at one end to roul up round and hard together the whole bed of Wool ; and then causing one to kneel hard upon the Roul, that it may not stir nor open, with your hands touze and pull out all the Wool in small pieces : And then taking a pair of Stock-cards sharp and large, and bound fast to a Form, or such like thing ; and on the same comb and card all over the Wool, till you see it perfectly and undistinctly mixed together, and that indeed it is become one entire colour of divers, without spots, or undivided locks or knots ; in which doing you shall be very careful and heedful with your eye, and if you find any hard Knot or other felter in the Wool, which

The mixing of colours.

which will not open, though it be never so small, yet you shall pick it out, and open it, or else being any other fault, cast it away; for it is the greatest Art in House-wifery to mix these Wools aright, and to make the Cloth without blemish.

Of the oyling
of wooll.

Your Wooll being thus mixed perfectly together, you shall then oyl it, or as the plain House-wife terms it, grease it, in this manner; being laid in a round flat bed, you shall take of the best Rape Oyl, or for want thereof, either well clarified Goose-grease, or Swines-grease, and having melted it, with your hand sprinkle it all over your Wooll, and work it very well into the same; then turn your Wooll about, and do as much on the other side, till you have oyled all the Wooll over, and that there is not a lock which is not moistned with the same.

The quantity
of Oyl.

Now for as much as if you shall put too much oyl upon the Wooll, you may thereby do great hurt to the Web, and make that the thred will not draw, but fall into many pieces, you shall therefore be sure at the first to give it little enough; and taking some thereof, prove it upon the Wheel: And if you see it draw dry, and breaketh, then you may put more Oyl unto it; but if it draw well, then to keep it there without any alteration. But because you shall be a little more certain in the truth of your proportions, you shall know, that three pounds of Grease or Oyl will sufficiently anoint or grease ten pounds of Wooll; and so according to that proportion, you may oyl what quantity you will.

Of tumming
wooll.

After your Wooll is oyl'd and anointed thus, you shall then turn it; which is, you shall put it forth as you did before when you mixed it, and card it over again upon your Stock cards; and then those Cardings which you strike off, are called tummings, which you shall lay by, till it come to a spinning. There be some House-wives which oyl as they mix it, and sprinkle every day as they lay it, and work the Oyl into it, and then rouling it up as before said, pull it out and turn it; so that then it goeth but once over the Stock Cards, which is not amiss; yet the other is more certain, though somewhat painful.

After

After your Wooll is thus mixed, oyled and tummed, you shall then spin it upon great Wooll-wheels, according to the order of good *House-wifery*: the actions whereof must be got by practice, and not relation; onely this, you shall be caretul to draw your thred according to the nature and goodness of your Wooll, not according to your particular desire; for if you draw a fine thred from a wooll which is of a course staple, it will want substance when it comes to the Walk Mill, or either there beat in pieces, or not being able to bed, and cover the threds well, be a cloth of a very short lasting. So likewise if you draw a course thred from a Wooll of a fine staple, it will then so much overthick, that you must either take away a great part of the substance of your wooll in flocks; or else let the cloth wear course and high, to the disgrace of good *House-wifery*, and loss of much cloth, which else might have been saved.

Of spinning
wooll.

Now for the diversities of spinning, although our ordinary *English House-wife* make none at all, but spin every thred alike, yet the better experienc'd make two manner of spinnings, and two sorts of thread: the one they call Warp, the other West, or else Wooffe; Warp is spun close, round and hard twisted, being strong and well smoothed, because it runs through the slies, and also endureth the fretting and beating of the Beam; The West is spun open, loose, hollow, and but half twisted; neither smoothed with the hand, nor made of any great strength, because it only crosseth the Warp, without any violent straining, and by reason of the softness thereof beddeth closer, and covereth the warp so well, that a very little beating in the Mill bringeth it to a perfect cloth: and though some hold it less substantial than the Web, which is all of twisted yarn, yet experience finds they are deceived, and that this open West keeps the cloth longer from fretting and wearing.

The diversion
of spinning.

After the spinning of your Wooll, some House-wives use to wind it from the broch into round clews for more ease in the Warping, but it is a labour may very well be saved, and you may as well Warp it from the broch as from the clew, as long as you know the certain weight, for by that only you are to be directed in all manner of Cloth walking.

Winding of
woollen-yarn.

Now.

Of Warping
Cloth,

Now as touching the warping of Cloth, which is both the skill and action of the Weaver, yet must not our English House-wife be ignorant therein, but though the doing of the thing be not proper unto her, yet what is done must not be beyond her knowledge, both to bridle the falshood of unconscionable Workmen, and for her own satisfaction, when she is rid of the doubt of anothers evil doing. It is necessary then that she first cast, by the weight of her wool, to know to how many yards of Cloth the Web will arise: for if the Wool be of a reasonable good staple, and well spun, it will run yard and pound; but if it be coarse, it will not run so much.

Now in your warping also, you must look how many pounds you lay in your warp, and so many you must necessarily preserve for your weft: for House-wives say, that best Cloth is made of even and even; for to drive it to greater advantage is hurtful to the cloth. There be other observations in the warping of cloth; as to number your Portasses, and how many goes to a yard: to look to the closeness and filling of the Sley, and such like, which sometimes hold, and sometimes fail, according to the art of the Workman; and therefore I will not stand much upon them, but refer the House-wife to the instruction of her own experience.

Of weaving of
Cloth, walking
and dressing it.

Now after your Cloth is thus warped, and delivered up into the hands of the Weaver, the House-wife hath finisht her labours for in the weaving, walking, and dressing thereof, she can challenge no property more than to intreat them severally to discharge their duties with a good conscience; that is to say, that the Weaver weave close, strong, and true, that the Walker or Fuller mill it carefully, and look well to his scowring Earth, for fear of beating holes in the cloth; and that the Cloth-worker or Sheer-man burle and dress it sufficiently, neither cutting the Wool too unreasonable high, whereby the cloth may not wear rough, nor too low, lest it appear thread-bare ere it come out of the hands of the Taylor.

Of Linnen
Cloth.

These things fore-warn'd and performed, the cloth is then to be used at your pleasure.

The next thing to this, which our English House-wife must be

be skilful in, is the making of all sorts of Linnen Cloth, whether if it be of Hemp or Flax; for from those two only is the most principal Cloth derived and made, both in this and other Nations.

And first touching the Soil fittest to sow Hemp upon, it must be a rich mingled Earth of Clay and Sand, or Clay and Gravel well tempered; and of these the best serveth best for that purpose: for the simple Clay, or the simple Sand are nothing so good; for the first is too tough, too rich, and too heavy, bringeth forth all Bun, and no Rind; the other is too barren, too hot, and too light, and bringeth forth such slender withered increase, that it is nothing near worth the labour. Briefly then, the best Earth is the mixt ground, which the Husbandman calls the Red hazle ground, being well ordered and manur'd; and of this Earth, a principal place to sow Hemp on, is in old Stack-yards, or other places kept in the Winter-time for the lair of Sheep or Cattel, when your ground is either scarce, or formerly not employed to that purpose; but if it be where the ground is plenty, and only used thereunto, as in *Holland* in *Lincoln-shire*, the Isle of *Axolm*, and such like places, then the custom of the Country will make you expert enough therein. There be some that will preserve the ends of their Corn-Lands, which butt upon grass, to sow Hemp or Flax thereon, and for that purpose will manure it well with sheep; for whereas Corn which butteth upon Grass Heds, where Cattel are teathered, is commonly destroyed, and no profit issuing from a good part thereof; by this means that which is sown, will be more safe and plentiful, and that which was destroyed, will bear a commodity of better value.

Now for the Tillage or ordering of the Ground where you sow Hemp or Flax, it would in all points be like that where you sow Barley, or at the least as often broke up, as you do when you sow Fallow Wheat, which is thrice at least, except it be some very mellow and ripe mould, as Stack-yards, and usual Hemp-Lands be, and then twice breaking up is sufficient, that is to say, about the later end of *February*, and the later end of *April*, at which time you shall sow it: and

T r r

herein

herein is to be noted, That you must sow it reasonable thick with good, sound, and perfect seed, of which the smoothest, roundest, and brightest, with least dust in it, is best: you must not lay it too deep in the Earth; but you must cover it close, light, and with so fine a mould as you can possibly break with your harrows, clotting beetles, or sleighting: then till you see it appear above the Earth, you must have it exceedingly carefully tended, especially an hour or two before the Sun rise, and as much before it sets; for birds and other vermine will otherwise pick the seed out of the Earth, and so deceive you of your profit.

**Of weeding of
Hemp and
Flax.**

Now for the weeding of Hemp, you may save the labour, because it is naturally of it self swift of growth, rough, and venomous, to any thing that grows under it, and will sooner of its own accord destroy those unwholsom weeds, than by your labour. But for your Flax or Line, which is a great deal more tender, and of harder increase, you shall as occasion serveth weed it, and trim it, especially if the Weeds overgrow it, but not otherwise: for if it once get above the Weeds, it will save it self.

**The pulling of
of Hemp or
Flax.**

Touching the pulling of Hemp or Flax, which is the manner of gathering of the same; you shall understand, that it must be pulled up by the roots, and not cut as Corn is, either with sickle or hook, and the best time for the pulling of the same is, when you see the leaves fall downward, or turn yellow at the tops, for that is full ripe; and this for the most part will be in *July*, and about *Mary Magdalins* day. I speak now touching the pulling of Hemp for Cloth: but if you intend to save any for seed, then you shall save the principal Bunches, and let them stand till it be the later end of *August*, or sometime till mid *September* following; and then seeing the seed turned brown and hard, you may gather it, for if it stand longer, it will shed sufficiently. As for Flax, which ripeneth a little after the Hemp, you shall pull it as soon as you see the seed turn brown, and bend the head to the Earth-ward, for it will afterward ripen of it self as the Bunch doth.

Now for the ripening or seasoning of Hemp or Flax, you shall

shall so soon as you have pulled it, lay it all along flat, and thin upon the ground, for a day and a night at the most, and no more; and then, as the House-wives call it, tye it up in Baits, and rear them upright till you can conveniently carry it to the water, which would be done as speedily as may be. Now there be some which do ripen their Hemp and Flax upon the ground where it grew, by letting it lye thereon to receive dews and rain, and the moistness of the earth, till it be ripe: but this is a vile and naughty way of ripening, it maketh the Hemp or Flax black, rough, and often rotten: therefore I would wish none to use it, but such as necessity compelleth therunto, and then to be careful to the often turning thereof, for it is the ground only which rots it.

Now for the watering of the Hemp or Flax, the best water is the running stream, and the worst the standing pit, yet because Hemp is a poysonous thing, and infecteth the water, and destroyeth all kind of fish: it is more fit to employ such pits and ditches as are left subject to annoyance, except you live near some great, broad, and swift streams, and then in the shallow parts thereof you may water without danger. Touching the manner of the watering thereof, you shall according to the quantity knock four or six strong Stakes into the bottom of the water, and set them square-wise, then lay your round baits or bundles of Hemp down under the water, the thick end of your bundle one way, and the thick end of another bundle another way; and so lay bait upon bait, till you have laid in all, and that the water covereth them all over; then you shall take over-lyers of Wood, and binding them over-thwart to the stakes, keep the Hemp down close, and especially at the four corners; then take great stones, gravel, and other heavy rubbish, and lay it between, and over the over-lyers, and so cover the Hemp close, that it may by no means stir, and so let it continue in the water four dayes and nights, if it be in a running water: but if it be in a standing water, then longer, and then take out one of the uppermost baits, and wash it, and if in the washing you see the leaf come off, then you may be assured the Hemp is watered enough. As for Flax less time will serve it, and it will shed the leaf in three nights.

The watering
of Hemp or
Flax.

Of washing out
of Hemp or
Flax.

When your Hemp or Flax is thus watered enough, you shall take off the gravel, stones, over-lyers of Wood, and unloosing it from the Stakes, take and wash out every bait and bundle severally by it self, and rub it exceeding clean, leaving not a leaf upon it, nor any filth within it; then set it upon the dry earth upright, that the water may drop from it; which done, load it up, and carry it home; and in some open close, or piece of ground rear it upright, either against hedges, pales, walls, back-sides of houses, or such like, where it may have the full strength or reflection of the Sun, and being throughly dryed then house it; yet there be some House-wives, which as soon as their Hemp comes from the water, will not rear it upright, but lay it upon the ground flat and thin for the space of a Sennight, turning it at the end of every two dayes, first on the one side, then on the other, and then after rear it upright, dry it, and so house it: and this Housewifery is good and orderly.

Now although I have hitherto joyned Hemp and Flax together, yet you shall understand that there are some particular differences between them; for whereas your Hemp may within a night or two after the pulling, be carried to the water, your Flax may not, but must be reared up, and dryed and withered a week or more to ripen the seed; which done, you must take Ripple-combs, and ripple your flax over, which is the beating or breaking off from the stalks the round bells or bobs which contain the seed, which you must preserve in some dry vessel or place till the Spring of the year, and then beat it, or thresh it for your use, and when your flax or line is spled, then you must send it to the water as aforesaid.

After your Hemp or Flax hath been watered, dryed, and housed, you may then at your pleasure break it, which is in a Brake of wood (whose proportion is so ordinary, that every one almost knows them) then break and beat out the dry bun or hexe of the Hemp or Flax from the rind which covers it, and when you brake either, you shall do it as neer as you can on a fair, dry, Sun-shine day, observing to set forth your Hemp and Flax, and spread it thin before the Sun, that it may be as dry as tinder before it come to the Brake; for if either in the lying close together,

ther, it shall give again or sweat, or through the moistness of the Air or place where it lies, receives any dampishness; you must necessarily receive it dried sufficiently again, or else it will never brake well, nor the Bun break and fall from the rind in order as it should.

Therefore, if the weather be not seasonable, and you need much to use your Hemp or Flax, you shall then spread it upon your Kila, and making a soft fire under it, dry it upon the same, and then brake it: yet for as much as this is oft-times dangerous, and much hurt hath been received thereby through casualty of fire, I would wish you to stick four Stakes in the Earth at least five foot above ground, and laying over them small over-layers of Wood, and open fleaks or hurdles upon the same; spread your Hemp; and also rear some round about it all, but at one open side; then with straw, small shavings, or other light dry wood make a soft fire under the same, and so dry it, and brake it, and this without all danger or mistrust of evil; and as you brake it, you shall open and look into it, ever beginning to break the root ends first; and when you see the Bun is sufficiently cruſt, fallen away, or at the most hangeth but in very small shivers within the Hemp or Flax, then you shall say, it is brakt enough; and then terming that which you called a Bait or Bundle before, now a Strike, you shall lay them together, and so house them, keeping in your memory either by score or writing, how many strikes of Hemp, and how many strikes of Flax you brake up every day.

The drying of
Hemp or Flax.

Now that your Hemp or Flax may brake so much the better, you must have for each several sort two several Brakes, which is an open and wide toothed or nickt Brake, and a close and straight toothed Brake: the first being to crush the Bun, and the later to beat it forth. Now for Flax, you must take first that which is the straighter for the Hemp, and then after one of purpose, much straighter and sharper; for the Bun of it being more small, tough, and thin, much necessarily be broken into much less pieces.

After your Hemp and Flax is brakt, you shall then swingle it, which is upon a Swingle-tree-block, made of an half Inch-board

Diversity of
Brakes.

boord about four foot above ground, and set upon a strong foot or stock, that will not easily move and stir, as you may see in any House-wives house whatsoever, better than my words can express: and with a piece of wood, called the Swingle-tree dagger, made in the shape and proportion of an old dagger, with a reasonable blunt edge, you shall beat out all the loose buns and shivers that hang in the Hemp or Flax, opening and turning it from one end to the other, till you have no bun or shiver to be perceived therein, and then striking a twist and sould in the mid't, which is ever the thickest part of the strike, lay them by till you have swingled all; the general profit whereof, is not onely the beating out of the hard Bun, but also an opening and softening of the Tear, whereby it is prepared and made ready for the Market.

Nor after you have swingled your Hemp and Flax over once, you shall take and shape up the refuse stuff which you beat from the same severally, and not only it, but the tops and knots, and half brack't bun, which fall from the Brake also; and drying them again, cause them to be very well thresh'd with flays, and then mixing them with the refuse which fell from the Swingle-tree, dress them all well with threshing and shaking, till the Buns be clean driven out of them; and then lay them in some safe dry place till occasion of use; these are called Swingle-tree Hurds, and that which comes from the Hemp will make window-cloth, and such like course stuff; and that which comes from the Flax, being a little towed again in a pair of Wool-Cards, will make a course Harding.

But to proceed forward in the making of Cloth, after your Hemp or Flax hath been swingled once over, which is sufficient for the Market, and for ordinary sale; you shall then for Cloth swingle it over the second time, and as the first did beat away the bun, and soften the rind, so this shall break and divide, and prepare it for the Heckle; and Hurds which are this second time beaten off, you shall also save: for that of the Hemp (being towed in Wool-Cards) will make a good Hempen-Harding, and that which cometh from the Flax (used in that manner) a Flax-Harding, better than the former.

After the second swingling of your Hemp, and that the Hurds there-

Of beating
Hemp.

thereof have been laid by, you shall take the strikes, and dividing them into dozens, and halt dozens, make them up into great thick roles, and then as it were broaching them, or spitting them upon long sticks, set them in the corner of some Chimney, where they may receive the heat of the fire, and there let them abide, till they be dried exceedingly; then take them, and laying them in a round Trough made for that purpose, so many as may conveniently lye therein, and there with Beetles beat them exceedingly, till they handle both without and within as soft and pliant as may be, without any hardness or roughness to be felt or perceived; then take them from the Trough, and open the Rouler, and divide the strikes severally as at the first, and if any be insufficiently beaten, role them up, and beat them over as before.

When your Hemp hath been twice swingled, dried and beaten, you shall then bring it to the Heckle, which Instrument needeth no demonstration, because it is hardly unknown to any woman whatsoever: and the first Heckle shall be coarse, open, and wide-toothed, because it is the first breaker or divider of the same, and the layer of the Strikes even and straight: and the hurds which come of this heckling, you shall mixe with those of the later swingling, and it will make the Cloth much better: then you shall heckle it the second time through a good straight Heckle, made purposely for Hemp, and be sure to break it very well, and sufficiently thereupon, and save both the Hurds by themselves, and the Strikes by themselves in several places.

Of Heckling
Hemp.

Now there be some very principal good House-wives, which use only but to heckle their Hemp once over, affirming, that if it be sufficiently dried and beaten, that once going over through a straight Heckle, will serve without more loss of labour, having been twice swingled before.

Now if you intend to have an excellent piece of hempen cloth, which shall equal a piece of very pure Linnen; then after you have beaten it as before said, and heckled it once over, you shall then roul it up again, dry it as before, and beat it again as much as at the first; then heckle it through a fine flaxen Heckle, and the Towe which falls from the Heckle, will make a principal hemping, but the Teare it self a cloth as pure as fine House-wifes Linnen, the indurance and lasting whereof is rare and wonderful,

ful : thus you see the uttermost Art in dressing of Hemp, for each several purpose in Cloth-making, till it come to the spinning.

The dressing of
Flax to the finest
use.

Flax, after it hath been twice swingled, needeth neither more drying nor beating than Hemp doth, but may be brought to the heckle in the same manner as you did Hemp ; only the heckle must be much finer and straighter ; and as you did before, the first heckle being much courser than the later , holding the Strike stiff in your hand, break it very well upon that heckle : then the hurds which comes thereof you shall save to make fine hurden Cloth of, and the Strike it self you shall pass thorough a finer heckle ; and the hurds which come from thence you shall save to make fine midling Cloth of, and the Tear it self for the best Linnen.

To dress Flax for the finest use that may be, as to make fair Holland Cloth of great price, or Thred for the most curious purpose, a secret hitherto almost concealed from the best *Housewives* with us ; you shall take your flax after it hath been handled, as is before shewed, and laying three strikes together, plat them in a plat of three so hard and close together as is possible, joyning one to the end of another, till you have platted so much as you think convenient, and then begin another plat ; and thus plat as many several plats as you think will make a Roul, like unto one of your hemp-rouls before spoke of, and then wreathing them hard together, make up the roul ; and so many rouls more or less, according to the purpose you dress them for : this done, put the rouls into a Hemp-trough, and beat them soundly, rather more than less than the hemp ; and then open and unplat it, and divide every strike from the other very carefully ; then heckle it through a finer heckle than any formerly used : for of heckles there be ever three sorts, and this must be the finest. And in this heckling you must be exceeding careful to do it gently, lightly, and with good deliberation, lest what you heckle from it should run to knots, or other hardness, as it is apt to do : but being done artificially as it ought, you shall see it look, and feel it handle like fine soft Cotton, or Jersey Wool ; and this which thus looketh and feeleth, and falleth from the Heckle, will notwithstanding make a pure Linnen, and run at
least

Last two yards and a half in the Pound; but the Teare it self will make a perfect, strong, and most fine Holland, running at last five yards in the pound.

After your Teare is thus drest, you shall spin it either upon a Wheel or Rock, but the Wheel is the swifter way, and the Rock maketh the finer Thread; you shall draw your Thread according to the nature of the Teare, and as long as it is even, it cannot be too small; but if it be uneven, it will never make a durable Cloth. Now for as much as every House-wife is not able to spin her own Teare in her own house, you shall make choice of the best Spinners you can hear of, and to them put forth your Teare to spin, weighing it before it go, and weighing it after it is spun and dr, allowing weight for weight, or an Ounce and an half for waste at the most. As for the Prices for Spinning, they are according to the nature of the Countrey, the fineness of the Teare, and the dearthness of Provisions; some spinning by the Pound, some by the Lay, and some by the Day, as the Bargain shall be made.

After your Yarn is spun upon Spindles, Spools, or such like, you shall then reel it upon Reels, of which the Reels which are hardly two foot in length, and have but onely two contrary cross Bars, are the best and most easie, and less to be troubled with ravelling, and in the weaving of your fine Yarn, to keep it the better from ravelling, you shall as you reel it, with a Ley-band of a big twist, divide the Slipping or Slean into divers Leyes, allowing to every Ley eighty Threads, and twenty Leyes to every slipping, the Yarn being very fine, otherwise less of both kinds. But if they spin for you by the Ley, as at a pound of Ley, and so, then the ancient custome hath been to allow to the Reel which was eight yards, at above 160. threads to every Ley, and 25. Leyes, and sometimes 30. Leyes to a Slipping, which will ordinarily amount to a Pound, or thereabouts; and so by that you may proportion forth the price for any manner of spinning whatsoever; for if the best thus, then the second so much abated, and so accordingly the worst.

After thus your Yarn is spun and reeld, being in the Slippings you shall scour it: Therefore, first to fetch out the Spots, you shall lay it in luke-warm water, and let it lie so three or

Of reeling of Yarn.

Of the scouring of Yarn.

four dayes, each day shifting it once, and wringing it out, and laying it in another water of the same nature; then carry it to a Well or a Brook, and there rinse it, till you see that nothing cometh from it but pure clean water; for whilest there is any filth within it, there will never be white Cloth: which done, take a Bucking-Tub, and cover the bottom thereof with very fine Ashen-ashes: then opening your Slippings, and spreading them, lay them on those Ashes, then cover those Slippings with Ashes again, then lay in more Slippings, and cover them with Ashes as before, and thus lay one upon another, till all your Yarn be laid in; then cover the uppermost Yarn with a Bucking-cloth, and lay therein a Peck or two (according to the bigness of the Tub) of Ashes more, then pour into all through the uppermost Cloth so much warm water, till the Tub can receive no more; and so let it stand all night. The next morning you shall set a Kettle of clean water on the fire, and when it is warm, you shall pull out the Spigget of the Bucking-Tub, and let the water therein run into another clean Vessel; and as the Bucking-Tub wasteth, so you shall fill it up again with the warm water on the fire, and as the water on the fire wasteth, so you shall fill it up again with the Lye which cometh from the Bucking-Tub, ever observing to make the Lye hotter and hotter till it seeth; and then when it so seetheth, you shall as before apply it with the boyling Eye, at least four hours together, which is called, the Driving of a Buck of Yarn. All which being done, you shall take off the Bucking-cloth, and then putting the Yarn with the Lye-ashes into large Tubs or Bowls, with your hands as hot as you can suffer it to pass, and labour the Yarn, Ashes, and Lye, a pretty while together: then carry it to a Well, River, or other clean scouring-water, and there rinse it as clean as may be from the Ashes; then take it, and hang it upon Poles abroad in the Air all day, and at night take the Slippings down, and lay them in water all night, then the next day hang them up again, and if any part of them dry, then cast water upon them, observing ever to turn that side outmost which whiteth slowest, and thus do at least seven dayes together. Then put all the Yarn again into a Bucking-tub without Ashes, and cover it.

Whiting of
Yarn.

it as before with a Bucking-cloth, and lay thereupon good store of fresh Ashes, and drive that Buck as you did before, with very strong seething Lies, the space of half a day or more; then take it forth, posse it, rinse it, and hang it up as you did before on the dayes, and laying it in water on the nights another week, and then wash it over in fair water, and so dry it up.

Other wayes there are of scouring and whiting of Yarn; as sleeping it in Bran and warm water, and then boyling it with *Oser* sticks, Wheat-straw, Water, and Ashes, and then polling, rinling, and bleaching it upon hedges, or bushes; but it is a foul and uncertain way, and I would not with any good *Housewife*, to use it.

After your Yarn is scoured and whited, you shall then wind it up into round Balls of a reasonable bigness, rather without bottoms than with any at all, because it may deceive you in the weight; for according to the pounds will arise your Yards and Lengths of Cloth.

After your Yarn is wound and weighed, you shall carry it to the Weavers, and warp it as was before shewed for Woollen Cloth, knowing this, that if your Weaver be honest and skilful, he will make you good and perfect Cloth of even and even, that is just the same weight in Weft, that there was in Warp. As for the action of Weaving it self, it is the Work-man's Occupation, and therefore to him I refer it.

After your Cloth is woven, and the Web or Webs come home, **The scouring** you shall first lay it to steep in all points as you did your Yarn, and whiting of to fetch out soyling and other filth, which is gathered from Cloth. the Weaver; then rinse it also as you did your Yarn, then Buck it also in Lye and Ashes, as before said, and rinse it, and then having Loops fixt to the Selvedge of the Cloth, spread it upon the Grass, and stake it down at the uttermost length and breadth, and as fast as it dries, water it again, but take heed you wet it not too much, for fear you mildew or rot it, neither cast water upon it, till you see it in a manner dry, and be sure weekly to turn it first on one side, and then on the other, and at the end of the first week, you shall Buck it as before in Lie and Ashes again, then rinse it, spread it, and water it as before; then if you see it whites apace, you need not give it any more Bucks with

the Ashes and the Cloth mixt together, but then a couple of clean Bucks, (as was before shewed in the Yarn) the next fortnight following; and then being whitened enough, dry up the Cloth, and use it as occasion shall require; the best season for the same whitening, being *April* and *May*. Now the course and worst House-wives, scour and white their Cloth with Water and Bran, and buck it with Lie and green Hemlocks: but, as before I said, it is not good, neither would I have it put in practice. And thus much for Wool, Hemp, Flax, and Cloth of each several substance.

CHAP VI.

Of Dairies, Butter, Cheese, and the necessary things belonging to that Office.

Here followeth now in this place after these Knowledges already rehearsed, the ordering and Government of Dairies, with the profits and commodities belonging to the same. And first touching the stock wherewith to furnish Dairies, it is to be understood, that they must be kine of the best choice and breed that our *English House-wife* can possibly attain unto, as of big bone, fair shape, right bred, and deep of Milk, gentle, and kindly.

Bigness of
Kine.

Touching the bigness of Bone, the larger that every Cow is, the better she is: for when either age or mischance shall disable her for the Pail, being of large bone she may be fed, and made fit for the Shambles, and so no loss but profit; and another to the Pail, as good and sufficient as her self.

For her Shape, it must a little differ from the Butchers rules; for being chose for the Dairy, she must have all the Signs of plenty of Milk: as a crumpled Horn, thin Neck, a hairy dewlap, and a very large Udder, with four Teats, long, thick, and sharp at the ends; for the most part either all white, of what colour soever the Cow be, or at least the fore-part thereof: and if it be well hair'd before and behind, and smooth in the bottom, it is a good sign.

The breed of
Kine.

As touching the right Breed of Kine through our Nation,

it

it generally affordeth very good ones, yet some Countries do far exceed other Countries, as *Cheeshire*, *Lancashire*, *Yorkshire*, and *Darbyshire* for black Kine; *Gloucestershire*, *Somersetshire*, and some part of *Wiltshire* for red Kine; and *Lincolnshire* for pide Kine: and from the breeds of these Countries generally do proceed the breeds of all other, howsoever dispersed over the whole Kingdom. Now for our Housewives directions, she shall chuse her Dairy from any of the best breeds before named, according as her opinion and delight shall govern her, only observing not to mix her breeds of divers kinds, but to have all of one entire choice without variation, because it is unprofitable; neither must you by any means have your Bull a forerunner from your Kine, but either of one Countrey, or of one shape and colour. Again, in the choice of your Kine, you must look diligently to the goodness and fertility of the soyl wherein you live, and by all means buy no Kine from a place that is more fruitful than your own, but rather harder; for the later will prosper and come on, the other will decay and fall into diseases, as the piling of blood, and such like; for which disease, and all other, you may find assured cures in the former Book called *Cheap and good*.

For the depth of milk in Kine (which is the giving of most Milk) being the main of a Housewives profit, she shall be very careful to have that quality in her Beasts. Now those Kine are said to be deepest of Milk which are new hatched, that is, which have but lately calved, and have their Milk deep springing in their Udders, for at that time she giveth the most Milk; and if the quantity then be not convenient, doubtless the Cow cannot be said to be of deep Milk. And for the quantity of Milk, for a Cow to give two Gallons at a meal, is rare and extraordinary; to give a Gallon and half, is much and convenient; and to give but a Gallon certain, is not to be found fault with. Again, those Kine are said to be deep of milk, which though they give not so exceeding much Milk as others, yet they give a reasonable quantity, and give it long, as all the year through, whereas other Kine that give more in quantity, will go dry, being with Calf some three months, some two, and some one, but these will give their usual

Depth of Milk
in Kine.

Of the going
dry of Kine.

usual measure, even the night before they Calve; and therefore are said to be Kine deep of milk. Now for the retained opinion, That the Cow which goeth not dry at all, or very little, bringeth not forth so good a Calf as the other, because it wanteth much of the nourishment it should enjoy, it is vain and frivolous; for, should the substance, from whence the milk proceedeth, convert to the other intended nourishment, it would be so superabundant, that it would convert either to disease or putrefaction; but letting these secret reasons pass, there be some Kine which are so exceeding full of Milk, that they must be milkt at least thrice a day, at Morning, Noon, and Evening, or else they will shed their Milk; but it is a fault rather than a vertue, and proceedeth more from a laxativeness or looseness of Milk, than from any abundance; for I never saw those three meals yet, equal the two meals of a good Cow, and therefore they are not truly called deep of Milk.

Touching the gentleness of Kine, it is a vertue as fit to be expected as any other; for if she be not affable to the Maid, gentle, and willing to come to the Pail, and patient to have her duggs drawn without skittishness, striking, or wildness, she is utterly unfit for the Dairy.

Of kindliness
in Kine.

As a Cow must be gentle to her Milker, so she must be kind in her own nature; that is, apt to conceive and bring forth, fruitful to nourish, and loving to that which springs from her; for so she bringeth forth a double profit, the one for the time present, which is in the Dairy, the other for the time to come, which is in the maintenance of the stock, and upholding of Breed.

The best time
to calve in for
the Dairy or
Breed.

The best time for a Cow to Calve in for the Dairy, is in the latter end of *March*, and all *April*, for then Grass beginneth to spring to its perfect goodness, which will occasion the greatest increase of Milk that may be, and one good early Cow will countervail two later; yet the Calves thus calved are not to be reared, but suffered to feed upon their Dams best Milk, and then to be sold to the Butchers, and surely the profit will equal the Charge; but those Calves which fall in *October*, *November*, or any time of the depth of Winter, may well be reared

reared up for breed, because the main profit of the Dairy is then spent, and such breed will hold up any Calves which are calved in the prime dayes, for they generally are subject to the disease of the Sturdy, which is dangerous and mortal.

The Housewife which only hath respect to her Dairy, and for Rearing of whose knowledge this discourse is written (for we have shewed Calves. the Grasier his Office in the English Husbandman) must rear her Calves upon the finger with flotten milk, and not suffer them to run with their Dams: the general manner whereof, and the cure of all the diseases incident to them, and all other Cattel, is fully declared in the Book called *Cheep and Good*.

To proceed then to the general use of Dairies, it consisteth The general use of Dairies. first in the Cattel (of which we have spoken sufficiently) then in the hours of milking, the ordering of the Milk, and the profits arising from the same. The best and most commended hours for milking, are indeed but two in the day; that in the Spring and Summer-time, which is the best season for the Dairy, is betwixt five and six in the morning, and six and seven a clock in the Evening. And although nice and curious Housewives will have a third hour betwixt them, as between twelve and one in the afternoon, yet the better experience do not allow it, and say as I believe, That two good meals of Milk are ever better than three bad ones; also in the milking of a Cow, the woman must sit on the neer side of the Cow, she must gently at the first handle and stretch her Duggs, and moisten them with Milk, that they may yeild out the Milk the better, and with less pain: she shall not settle her self to milk, nor fix her Pail firm to the Ground, till she see the Cow stand sure and firm, but be ready upon any motion of the Cow to save her Pail from overturning. When she seeth all things answerable to her desire, she shall then milk the Cow boldly, and not leaving stretching and straining of her Teats, till not one drop of Milk more will come from them; for the worst point of Housewifery that can be, is to leave a Cow half milked; for besides the loss of the Milk, it is the only way to make a Cow dry, and utterly unprofitable for the Dairy. The Milkmaid, whilst she is in milking, shall do nothing rashly or suddenly

denly about the Cow which may afright or amaze her ; but as she came gently, so with all gentleness she shall depart.

Ordering of Milk.

Touching the well-ordering of Milk after it is come home to the Dairy, the main point belonging thereunto is the Housewives cleanliness in the sweet and neat keeping of the Dairy-house, where not the least mote of any filth may by any means appear, but all things either to the eye or nose so void of fowrness or stuttishness, that a Princes Bed-chamber must not exceed it. To this must be added the sweet and delicate keeping of her Milk-vessels, whether they be of wood, earth, or lead, the best as yet is disputable with the best Housewives ; only this opinion is generally received, That the wooden vessel which is round and shallow, is best in cold vaults, the earthen vessels principal for long keeping, and the leaden vessel for yeilding of much Cream : but howsoever, any and all these must be carefully scalded once a day, and set in the open Air to sweeten, lest getting any taint of fowrness into them, they corrupt the Milk that shall be put therein.

Ordering of Milk vessels.

Syling of Milk.

But to proceed to my purpose, after your milk is come home, you shall as it were strain it from all unclean things through a neat and sweet kept Syle-dish, the form whereof every Housewife knows ; and the bottom of this Syle through which the Milk must pass, must be covered with a very clean-washt fine linnen Cloth, such an one as will not suffer the least mote or hair to go through it. You shall into every vessel soyl put a pretty quantity of milk, according to the proportion of the vessel, the broader it is, and the shallower it is, the better it is, and yeildeth ever the most Cream, and keepeth the milk longest from fowring.

Profits arising from Milk.

Now for the profits arising from Milk, they are three of especial account, as Butter, Cheese and Milk, to be eaten simple or compounded. As for Curds, lowr milk or Whig, they come from secondary means, and therefore may not be numbred with these.

Of Butter.

For your Butter, which only proceedeth from the Cream which is the very heart and strength of Milk, it must be gathered very carefully, diligently, and painfully. : And though clean-

cleanliness be such an ornament to a Housewife, that if she want any part thereof, she loseth both that and all good names else: yet in this Action it must be more seriously employed than in any other.

To begin then with the fleeting or gathering of your Cream Of fleeting Cream. from the Milk, you shall do it in this manner. The Milk which you do milk in the morning, you shall with a fine thin shallow dish made for the purpose, take off the Cream about five of the Clock in the Evening; and the Milk which you did milk in the evening, you shall fleet and take off the Cream about five of the clock in the morning; and the Cream so taken off you shall put it into a clean sweet and well leaded earthen pot close covered, and set it in a close place; and this Cream so gathered, Of keeping Cream. you shall not keep above two dayes in the Summer, and not above four in the Winter, if you will have the sweetest and best butter, and that your Dairy contain but five Kine and no more; but how many or few soever you keep, you shall not by any means preserve your Cream above three dayes in Summer, and not above six in the Winter.

Your Cream being neatly and sweet kept, you shall churn Of churning butter, and the dayes. or churn it on those usual dayes which are fittett either for your use in the house, or the Markets adjoyning neer unto you, according to the purpose for which you keep your Dairy. Now the dayes most accustomedly held amongst ordinary Housewives, are Tuesdayes and Fridayes: Tuesday in the afternoon, to serve Wednesday-morning Market, and Friday-morning to serve Saturday-Market; for Wednesday and Saturday are the most general Market-dayes of this Kingdom, and Wednesday, Friday, and Saturday the usual Fasting-days of the week, and so meetest for the use of Butter. Now for Churning, take your Cream, and through a strong and clean cloth strain it into the Churn; and then covering the Churn close, and setting it in a place fit for the Action in which you are employed; as in the Summer, in the coolest place of your Dairy, and exceeding early in the morning, or very late in the evening: And in the Winter, in the warmest place of your Dairy, and in the most temperate Hours, as about noon, or a little before or after, and so churn it with

swift strokes, marking the noise of the same, which will be solid, heavy, and entire, untill you hear it alter, and the sound is light, sharp, and more spiritly; and then you shall say that your Butter breaks, which perceived both by this sound, the lightness of the Churm-staff, and the sparks and drops which will appear yellow about the lid of the Churm; then cleanse with your hand both the lid and the inward side of the Churm, and having put all together, you shall cover the Churm again, and then with easie strokes round and not to the bottom, gather the butter together into one entire lump and body, leaving no pieces thereof several or unjoynd.

**Helps in
churning.**

Now forasmuch as there be many mischiefs and inconveniencies which may happen to butter in the churning, because it is a body of much tenderness, and neither will indure much heat nor much cold, for if it be overheated, it will look white, crumble, and be bitter in tast; and if it be over-cold, it will not come at all, but will make you wast much labour in vain: which faults to help, if you churm your butter in the heat of Summer it shall not be amiss, if during the time of your churning, you place your churm in a pail of cold water, as deep as your Cream riseth in the churm, and in the churning thereof let your strokes go slow, and be sure that your churm be cold when you put in your Cream. But if you churm in the coldest time of Winter, you shall then put in your Cream before the churm be cold, after it hath been scalded, then you shall place it within the Air of the fire, and churm it with as swift strokes, and as fast as may be, for the much labouring of it will keep it in a continual warmth, and thus you shall have your butter good, sweet, and according to your wish. After your butter is churn'd or churm'd, and gathered well together in your churm, you shall then open your churm, and with both your hands gather it well together, and take it from the butter-milk, and put it into a very clean bowl of wood or pansion of earth sweetned for the purpose, and if you intend to spend the butter sweet and fresh, you shall have your bowl or pansion filled with very clean water, and therein with your hand you shall work the butter, turning and tolling it to and fro, till you have by that labour beaten and wash'd out all the

**The handling
of Butter.**

the Butter-milk, and brought the Butter to a firm substance of it self, without any other moisture; which done you shall take the Butter from the water, and with a point of a Knife scotch and slice the Butter over and over every way as thick as is possible, leaving no part through which your Knife must not pass, for this will cleanse and fetch out the smallest hair or mote, or rag of a Strainer, and any other thing which by casual means may happen to fall into it.

After this you shall spread the butter in a bowl thin, and take so much Salt as you think convenient, which must by no means be much for sweet butter, and sprinkle it thereupon; then with your hands work the butter and the salt exceeding well together, and then make it up either into dishes, pounds, or half pounds at your pleasure.

If during the month of May before you salt your butter you save a lump thereof, and put it into a vessel, and so set it into the Sun the space of that month, you shall find it exceeding sovereign and medicinable for wounds, strains, aches, and such like grievances. Of May-butter.

Touching the powdering up, or potting of Butter, you shall by no means, as in fresh butter, with the butter-milk out with water, but only work it clear out with your hands: for water will make the butter rusty or reese: this done, you shall weigh your Butter, and know how many pounds there is thereof; for should you weigh it after it was salted, you would be much deceived in the weight: which done, you shall open the butter, and salt it very well and thoroughly, beating it in with your hand till it be generally dispersed through the whole butter: then take clean earthen pots exceedingly well leaded, lest the brine should leak through the same, and cast salt into the bottom of it: then lay in your butter, and press it down hard within the same; and when your pot is filled, then cover the top thereof with Salt, so as no butter be seen: then closing up the pot, let it stand where it may be cold and safe. But if your Dairy be so little that you cannot at first fill up the pot, you shall then when you have potted up so much as you have, cover it all over with salt, and put the next quantity upon it till the pot be full.

Now there be housewives whose Dairies are great, which can by no means conveniently have their butter contained in pots, as in *Holland, Suffolk, Norfolk*, and such like, and therefore are forced to take barrels very close and well made; and, after they have salted it well, they fill their barrels therewith; then they take a small stick clean and sweet, and therewith make divers Holes down through the butter even to the bottom of the barrel, and then make a strong brine of water and salt, which will bear an Egg, and after it is well boyl'd, well skimm'd, and cool'd, then pour it upon the top of the butter till it swim above the same, and so let it settle. Some use to boyl in this brine a branch or two of *Rosemary*, and it is not amiss, but pleasant and wholsome.

When to pot
Butter.

Now although you may at any time betwixt *May* and *September* pot up butter, observing to do it in the coolest time of the morning; yet the most principal season of all is in the month of *May* only; for then the Air is most temperate, and the Butter will take salt the best, and the least subject to rasing.

The best use of Butter-milk for the ablest House-wife is Charitably to bestow it on the poor neighbours, whose wants do daily cry out for sustenance; and no doubt but she shall find the profit thereof in a divine place, as well as in her earthly business. But if her own wants command her to use it for her own good, then she shall of her Butter-milk make Curds, in this manner: she shall take her Butter-milk, and put it into a clean earthen vessel, which is much larger than to receive the Butter-milk only; and looking unto the quantity thereof, she shall take as it were a third part so much of new Milk, and set it on the fire, and when it is ready to rise, take it off, and let it cool a little; then pour it into the Butter-milk, in the same manner as you would make a Posset; and having stirred it about, let it stand; then with a fine Scummer, when you will use the curds (for the longer it stands, the better the Curds will eat) take them up onto a Cullender, and let the Whey drop well from it; and then eat them either with Cream, Ale, Wine or Beer. As for the Whey, you must keep it a so in a sweet Stone-vessel, for it is that which is called Whig,
and

and it is an excellent cool Drink, and wholesome, and may very well be drunk a Summer through, in stead of any other Drink; and without Doubt, will slake the thirst of any labouring man as well, if not better.

The next main profit which ariseth from the Dairy, is *Of Cheese.* Cheese, of which there be divers kinds, as new Milk, or Morning-milk Cheese, Nettle-Cheese, Flitten-milk-cheese, and Eddish, or After-math-cheese, all which have their several orderings and compositions, as you shall perceive by the discourse following. Yet before I do begin to speak of the making of the cheese, I will shew you how to order your *Cheeflep-bag* or *Runnet*, which is the most principal thing wherewith your Cheese is compounded, and giveth the perfect taste unto the same.

The *Cheeflep-bag*, or *Runnet*, is the *Stomach-bag* of a young sucking Calf, which never tasted other food than milk, where the Curd lieth undigested. Of these Bags you shall in the beginning of the year, provide your self good store, and first open the bag, and pour out into a clean vessel the Curd and thick substance thereof; but the rest which is not curdled you shall put away: then open the Curd, and pick out of it all manner of motes, chiers of Grass, or the filth gotten into the same: then wash the Curd in so many cold waters, till it be as white and clean from all sorts of moats as is possible; then lay it on a clean cloth that the water may drain from it; which done, lay it in another dry vessel; then take a handful or two of Salt, and rub the Curd therewith exceedingly, then take your bag, and wash it also in divers cold waters till it be very clean, and then put the Curd and the Salt up into the bag, the bag being also well rubb'd within with Salt; and so put it up, and salt the outside also over, and then close up the pot close, and so keep them a full year before you use them. For touching the hanging of them up in chimney-corners, (as course Housewives do) it is sluttish, naught, and unwholsome; and the spending of your Runnet whilst it is new, makes your Cheese heavy, and to prove hollow.

Of the Cheeflep bag or Runnet.

When your Runnet or Earning is fit to be used, you shall season

season it after this manner. You shall take the Bag you intend to use, and opening it, put the Curd into a Stone Mortar or a Bowl, and with a wooden Pestle, or a rolling-pin beat it exceedingly, then put to it the yolks of two or three Eggs, and half a Pint of the thickest and sweetest Cream you can fleet from your Milk, with a penny-worth of Saffron finely dried and beaten to powder, together with a little Cloves, and Mace, and stir them all passing well together, till they appear but as one substance, and then put it up in the bag again; then you shall make a very strong brine of Water and Salt, and in the same you shall boyl a handful of Saxifrage, and then when it is cold, clear it into a clean earthen vessel: then take out of the bag half a dozen spoonfuls of the former curd, and mix it with the Brine; then clotting the Bag up again close, hang it with the Brine, and in any case also steep in your Brine a few Walnut-tree leaves, and so keep your Runnet a fortnight after before you use it; and in this manner dress all your Bags so, as you may ever have one ready after another, and the youngest a fortnight old ever at the least; for that will make the Earning quick and sharp, so that four Spoonfuls thereof will suffice for the gathering and seasoning of at least twelve Gallons of Milk, and this is the choicest and best Earning which can possible be made by any Housewife.

To make a New-milk or Morning-milk Cheese, which is the best Cheese made ordinarily in our Kingdom, you shall take your Milk early in the Morning, as it comes from the Cow, and fyle it into a clean Tub; then take all the Cream also from the Milk you milk'd the Evening before, and strain it into your new Milk. Then take a pretty quantity of clean Water, and having made it scalding hot, pour it into the Milk also to scald the Cream and it together, then let it stand, and cool it with a Dish till it be no more lake-warm; then go to the Pot where your Earning-bags hang, and draw from thence so much of the Earning without stirring of the Bag, as will serve for your proportion of Milk, and strain it therein very carefully; for if the least mote of the Curd of the Earning fall into the Cheese, it will make the Cheese rot and mould;

mould; when your Earning is put in, you shall cover the Milk, and so let it stand half an hour or thereabout; for if the Earning be good, it will come in that space, but if you see it doth not, then you shall put in more: being come, you shall with a dish in your hand break and mash the curd together, potting and turning it diversly: which done, with the flat palmes of your hands very gently press the Curd down into the bottom of the Tub; then with a thin dish take the Whey from it as clear as you can, and so having prepared your Cheese-fat answerable to the proportion of your Curd, with both your hands joyned together put your Curd therein and break it, and press it hard down into the Fat, till you have till'd it; then lay upon the top of the Curd your hard Cheese-board, and a little small weight thereupon, that the Whey may drop from it into the under vessel; when it hath done dropping, take a large Cheese-cloth, and having wet it in the cold water, lay it on the Cheese-board, and then turn the Cheese upon it; then lay the cloth into the Cheese-fat, and so put the Cheese therein again, and with a thin slice thrust the same down close on every side: then laying the cloth also over the top to lay on the Cheese-board, and so carry it to your Press, and there press it under a sufficient weight: after it hath been there prest half an hour, you shall take it and turn it into a dry cloth, and put it into the Press again, and thus you shall turn it into dry clothes at least five or six times in the first day, and ever put it under the Press again, not taking it therefrom till the next day in the evening at soonest, and at the last time it is turned, you shall turn it into the dry Fat without any Cloth at all.

When it is prest sufficiently, and taken from the Fat, you shall then lay it in a Kimnel, and rub it first on the one side, and then on the other with salt, and so let it lye all that night, then the next morning you shall do the like again, and so turn it out upon the brine, which comes from the Salt two or three daies more, according to the bigness of the Cheese, and then lay it upon a fair Table or Shelf to dry, forgetting not every day once to rub it all over with a clean Cloth, and

and then to turn it till such time that it be thoroughly dry, and fit to go into the Cheefe-heck: and in this manner of drying, you must observe to lay it first where it may dry hastily, and after where it may dry at more leisure; thus you may make the best and most principal Cheefe.

A Cheefe of
two meals.

Now if you will make a Cheefe of two meals, as your mornings new milk, and the evenings Cream-milk, all you shall do, is but the same formerly rehearsed. And if you will make a simple morning milk Cheefe, which is all of new milk, and nothing else, you shall then do as is before declared, only you shall put in your Earning so soon as the Milk is tyld, (if it have any warmth in't) and not scald it: but if the warmth be lost, you shall put it into a Kettle, and give it the air of the fire.

Of Nettle
Cheefe.

If you will have a very dainty Nettle-Cheefe, which is the finest Summer Cheefe which can be eaten, you shall do in all things as was formerly taught in the New-milk Cheefe compound; onely you shall put the Curd into a very thin Cheefe-fat, not above half an inch, or a little better deep at the most, and then when you come to dry them, as soon as it is drained from the Brine, you shall lay it upon fresh Nettles, and cover it all over with the same, and so lying where they may feel the Air, let them ripen therein, observing to renew your Nettles once in two dayes, and every time you renew them, to turn the Cheefe or Cheeses, and to gather your Nettles as much without stalks as may be, and to make the bed both under and aloft as smooth as may be for the more even and fewer wrinkles that your Cheefe hath; the more dainty is your House-wife accounted.

Of flitten milk
cheefe.

If you will make flitten milk Cheefe, which is the courtest of all cheefe, you shall take some of the milk, and heat it upon the fire to warm all the rest; but if it be sower, that you dare not adventure the warming of it for fear of breaking, then you shall heat water, and with it warm it, then put in your earning as before shewed, and gather it, press it, salt it, and dry it, as you did all other Cheeses.

Of Eddish
Cheefe.

Touching your Eddish Cheefe, or Winter Cheefe, there is not any difference betwixt it and your Summer Cheefe, touch-

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ing the making thereof only, because the season of the year denyeth a kindly drying or hardning thereof, it differeth much in taste, and will be soft always; and of these eddith Cheeses you may make as many kinds as of Summer Cheeses, as of one meal, two meals, or of Milk that is flotten.

When you have made your Cheese, you shall then have care of the Whey, whose general use differeth not from that of Butter-milk, for either you shall preserve it to bestow on the poor, because it is a good Drink for the labouring man, or keep it to make Curds of it; or lastly, to nourish and bring up your Swine.

If you will make Curds of your best Whey, you shall set it upon the fire, and being ready to boyl, you shall put into it a pretty quantity of Butter-milk, and then as as you see the Curds arising up to the top of the Whey, with a Skummer skim them off, and put them into a Cullender, and then put in more Butter-milk; and thus do whilst you can see any Curds arise; then the Whey being drained clean from them, put them into a clean vessel, and so serve them forth as occasion shall serve.

Of Whey-Curds.

CHAP. VII.

The Office of the Mault, and the several secrets, and knowledges belonging to the making of Mault.

IT is most requisite and fit, that our *House-wife* be experienced and well practised in the well making of Mault, both for the necessary and continual use thereof, as also for the general profit which accreweth and ariseth to the *Husband, House-wife*, and the whole Family; for as from it is made the Drink by which the Household is nourished and sustained, so to the fruitful Husbandman, (who is the Master of rich Ground, and much Tillage) it is an excellent Merchandise, and a Commodity of so great Trade, that not onely special Towns and Countries are maintained thereby, but also the whole Kingdom, and divers others Neighbouring Nations,

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tions. This office or place of knowledge belongeth particularly to the House-wife; and though we have many excellent maulsters, yet it is properly the work and care of the woman, for it is a house-work, and done altogether within doors, where generally lyeth her charge; the man only ought to bring in, and to provide the Grain, and excuse her from portage or too heavy burthens; but for the Art of making the Malt, and the several labours appertaining to the same, even from the Fat to the Kiln, it is only the work of the House-wife, and the Maid-servants to her appertaining.

To begin then with the first knowledg of our Maulster, it consisteth in the election and choice of Grain, fit to make Mault on, of which there are indeed truly but two kinds, that is to say, Barley, which is of all other the most excellent for this purpose; and Oats, which when Barley is scant or wanting, maketh also a good and sufficient Mault: and though the drink which is drawn from it, be neither so much in the quantity, so strong in the substance, nor yet so pleasant in the taste, yet is the Drink very good and tolerable, and nourishing enough for any reasonable Creature. Now I do not deny but there may be made Mault of Wheat, Pease, Lupins, Vetches, and such like, yet it is with us of no retained custome, nor is the Drink simply drawn or extracted from those Grains, either wholesome or pleasant, but strong and fullsome: therefore I think it not fit to spend any time in treating of the same. To speak then of the election of Barley, you shall understand, that there be divers kinds thereof, according to the alteration of Soils, some being big, some little, some empty, some full, some white, some brown, and some yellow: but I will reduce all these into three kinds, that is, into the Clay-Barley, the Sandy-Barley, and the Barley which groweth on the mixt Soyl. Now the best Barley to make Mault on, both for yielding the greatest quantity of matter, and making the strongest, best, and most wholesome Drink, is the Chy-Barley well drest, being chenn Corn of it self, without Weeds or Oats, white of Colour, full in substance, and sweet in taste. That which groweth on the mixt Grounds is the next; for though it be subject to some Oats
and

and some Weeds; yet being painfully and carefully drest, it is a fair and bol'd Corn, great and full; and though somewhat browner than the former, yet it is of a fair and clean complexion. The last and worst grain for this purpose, is the Sandy Barly; for although it be seldome or never mixt with Oats, yet if the Tillage be not painfully and cunningly handled, it is much subject to Weeds of divers kinds, as Tares, Vetches, and such like, which drink up the Liquor in the Brewing, and make the Yeeld or quantity thereof very little and unprofitable: besides the Grain naturally of it self hath a yellow, withered, empty husk, thick and unfurnished of meal, so that the Drink drawn from it, can neither be so much, so strong, so good, nor so pleasant. So that to conclude, the clean Clay Barley is best for profit in the Sale-drink, for strength and long lasting.

The Barley in the mixt grounds will serve well for Households and Families, and the Sandy Barley for the poor, and in such places where better is not to be gotten. And these are to be known of every *Husband* or *Housewife*: the first by his whiteness, greatness, and fulness; the second by his brownness; and the third by his yellowness, with a dark brown nether end, and the emptiness and thickness of the husk: and (in this election of Barley) you shall note, That if you find in it any wild Oats, it is a sign of rich Clay-ground, but ill Husband; yet the Mault made thereof is not much amiss, for both the wild Oat and the perfect Oat give a pleasant sharp relish to the drink, if the quantity be not too much, which is evermore to be respected. And to conclude this matter of election, great care must be had of both *Husband* and *Housewife*, that the Barley chosen for Mault, be exceeding sweet, both in smell and taste, and very clean drest: for any corruption maketh the Mault loathsome, and the foul dressing affordeth much loss.

After the skilful election of Grain for Mault, the *Housewife* is to look to the situation goodness and apt accommodation of the Mault-house, for in that consisteth both much of the skill, and much of the profit. For the general situation of the House, it would (as near as can be) stand upon firm dry ground, having prospect every way, with open Windows and Lights to let in the

Of the Mault-house, and the situation.

Wind, Sun, and Air, which way the Master pleaseth, both to cool and comfort the Grain at pleasure, and also close-shuts, or draw-windows to keep out the Frosts and Storms, which are the only lets and hinderances for making the Mault good and perfect. For the model or form of the houses, some are made round; with a Court in the middle, some long, and some square, but the round is the best, and the least laborious; for the Cisterns or Fats being placed (as it were) at the head or beginning of the Circle, and the Pump or Well, (but the Pump is best) being close adjoyning, or at least by conveyance of troughs made as useful as if it were near adjoyning, the Corn being steeped, may with one persons labour and a shovel, be cast from the Fat or Cistern to the floor, and there coucht; then when the Couch is broken, it may in the turning either with the hand or the shovel be carried in such a circular house round about from one floor to another, till it come to the Kiln, which would also be placed next over against the Pump and Cisterns, and all contained under one roof.

And thus you may empty steeping after steeping, and carry them with one persons labour from floor to floor, till all the floors be filled: in which circular motion you shall find, that ever that which was first steeped, shall first come to the Kiln, and so consequently one after another, in such sort as they were steeped, and your work may evermore be constant, and your floors at no time empty, but at your own pleasure; and all the labour done onely with the hand and shovel, without carrying or re-carrying, or lifting heavy burthens, which is both troublesome and offensive, and not without much loss, because in such cases ever some grain scattereth.

Now over against the Kiln-hell or Furnace, (which is evermore intended to be on the ground) should a convenient place be made to pile the fewel for the Kiln, whether it be Straw, Bracken Furies, Wood, Coal, or other fewel; but sweet Straw, is of all other the best and neatest. Now it is intended that this *Mault-house* may be made two stories in height, but no higher: over your Cisterns shall be made the Garners wherein to keep your Barley before it be steeped; in the bottoms of these Garners, standing directly over the Cisterns, shall be convenient

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holes made to open and shut at pleasure, through which shall run down the Barley into the Cistern.

Over the Bed of the Kiln can be nothing but the place for the Hair-cloth, and a spacious roof open every way, that the smoke may have a free passage, and with the least air be carried from the Kiln, which maketh the Malt sweet and pleasant. Over that place where the fewel is piled, and is next of all to the bed of the Kiln, would likewise be other spacious Garners made, some to receive the Maule as soon as it is dryed with the Comb and Kiln-dust, in which it may lye to mellow and ripen, and others to receive the Mault after it is skreened and drest up; for to let it be too long in the Comb, as above three months at longest, will make it both corrupt, and breed Weevils and other worms, which are the greatest destroyers of Mault that may be. And these Garners should be so conveniently plac'd before the front of the Kiln-bed, that either with the Shovel or a small Scuttle you may cast, or carry the Mault once dryed into the Garners.

For the other part of the floors, they may be employed as the ground-floors are, for the receiving of the Mault when it comes from the Cistern; and in this manner, and with these accommodations you may fashion any Mault-house, either round, long, square, or of what proportion soever, as either your estate, or the convenience of the ground you have to build on shall administer.

Next to the site or proportion of the ground, you shall have a principal care for the making of your Mault-floors, in which all the custom and the nature of the soyl binds many times a man to sundry inconveniences, and that a man must necessarily build according to the matter he hath to build withall, from whence arise the many diversities of Maulters. yet you shall understand, that the general best Mault-floor both for Summer and Winter, and all seasons, is the Cave or vaulted Arch, which is hewed out of a dry and main gretty Rock, for it is both warm in Winter, and cool in Summer, and generally comfortable in all seasons of the year whatsoever. For it is to be noted, That all Housewives do give over the making of Mault in the extreame heat of Summer, it is not because the Mault is worse that is made in Summer than that which is made in Winter; but because the floors are more unreasonable, and that the Sun getting a power into such open places

Of Mault-floors.

places, maketh the Grain which is *Reaped* to sprout and come so swiftly, that it cannot endure to take time on the Floor, and get the right seasoning which belongeth to the same: whereas these kind of Vaults being dry, and as it were coucht under the ground, not only keepeth out the Sun in Summer, which maketh the Mault come much too fast, but also defendeth it from frost and cold bitter blasts in sharp Winter, which will not suffer it to come, or sprout at all; or if part do come and sprout, as that which lyeth in the heart of the bed; yet the upper parts and outside by means of extreame cold cannot sprout, but being again dried hath its first hardness, and is one and the same with raw Barley; for every *House-wife* must know, That if Mault do not come as it were altogether, and at an instant, and not one come more than another, the Mault must needs be very much imperfect.

The next Floor to the Cave, or dry Sandy Rock, is the Floor which is made of Earth, or a stiff strong binding clay well watered, and mixt with Horse-dung and Soap-ashes, beaten and wrought together, till it come to one solid firmness; this Floor is a very warm comfortable Floor in the Winter season, and will help the grain to come and sprout exceedingly, and with the help of windows to let in the cold Air, and to shut out the violent reflection of the Sun, will serve very conveniently for the making of Mault for nine months in the year, that is to say, from September till the end of May; but for June, July, and August, to imploy it to that purpose, will breed both loss and incumbrance. The next floor to this of the Earth, is that which is made of Plaster, or Plaster of Paris, being burnt but in a seasonable time, and kept from wet, till the time of shooting, and then smoothly laid, and well levelled; the imperfection of the Plaster Floor is only the extreame coldness thereof, which in frosty and cold seasons so bindeth in the heart of the Grain, that it cannot sprout; for which cause it behoveth every Maultster that is compelled to these Floors, to look well unto the seasons of the year, and when he findeth either the frosts, Northern blasts, or other nipping storms to rage too violently, then to make his first couches or beds, when the Grain cometh newly out of the Cestern, much thicker and rounder than otherwise he would do; and as the Cold abateth,

or the Corn increaseth in sprouting, so to make Couches or Beds thinner and thinner; for the thicker and closer the grain is coucht and laid together, the warmer it lyeth, and so catching heat, the sooner it sprouteth; and the thinner it lyeth, the cooler it is, and so much the slower in sprouting. This Floor, if the Windows be close, and guard off the Sun sufficiently, will (if necessity compel) serve for the making of Mault ten moneths in the year; only in *July* and *August* which contain the Dog-dayes, it would not be employed, nor in the time of any Frost, without great care and circumspection.

Again, there is in this Floor another fault, which is a natural tainting out of dust; which much sullieth the Grain; and, being dried, makes it look dun and foul, which is much disparagement to the Maultster; therefore she must have great care, that when the Mault is taken away, she sweep and keep her floors as clean and neat as may be. The last and worst is the boarded Floor, of what kind soever it be, by reason of the too much heat thereof, and yet of boarded floors the Oaken boarded is the coolest and longest lasting; the Elme or Beech is next, then the Ash, and the worst (though it be the fairest to the Eye) is the Firre, for it hath in it self (by reason of the Frankincense and Turpentine which it holdeth) a natural heat, which mixed with the violence of the Sun in the Summer time, forceth the Grain not only to sprout, but to grow in the Couch, which is much loss, and a foul imputation. Now these boarded floors can hardly be in use for above five months at the most, that is to say, *October*, *November*, *December*, *January*, and *February*; for the rest the Sun hath too much strength, and these boarded Floors too much warmth; and therefore in the coolest times it is good to observe to make the Couch thin, whereby the Air may pass through the Corn, and so cool it, that it may sprout at leisure.

Now for any other Floor, besides these already named, there is not any good to mault upon; for the common Floor which is of natural Earth, whether it be Clay, Sand, or Gravel, if it have no mixture at all with it more than its own nature, by oft treading upon it, groweth to gather the nature of saltness, or Salt-petre into it, which not only giveth an ill taste to the Grain that is laid upon the same, but also his moisture and mouldiness, which in the

Imperfect
Floors.

the moist times of the year arise from the ground, it often corrupteth and putrifieth the Corn; the rough paved floor by reason of the unevenness, is unfit to mault on, because the Grain getting into the crannies, doth there lye, and is not removed or turned up and down as it should be with the hand, but many times is so fixed to the ground, that it sprouteth and groweth up into a green blade, affording much loss and hinderance to the Owner.

The smooth paved Floor, or any Floor of Stone whatsoever is fall as ill; for every one of them naturally against much wet or change of weather, will sweat and distill forth such abundant moisture, that the Mault lying upon the same, can neither dry kindly, nor expell the former moisture received in the Cistern, but also by that over-much moisture many times rotteth, and comes to be altogether useles. Lastly, for the floor made of Lime and Hair, it is as ill as any formerly spoken of, both in respect of the nature of the Lime, whose heat and sharpness is a main enemy to Mault, or any moist Corn, as also in respect of the weakness and brittleness of the substance thereof, being apt to moulder and fall in pieces with the lightest treading on the same; and that Lime and Dust once mixing with the Corn, it doth so poyson and suffocate it, that it neither can sprout, nor turn serviceable for any use.

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thereof.

Next unto the Mault-floors, our Maulster shall have a great care in the framing and fashioning of the Kiln, of which there are sundry sorts of models, as the ancient form which was in times past used of our fore-fathers, being only made in a square proportion at the top, with small splints or rafters, joyned within four inches one of another going from a main beam crossing the mid-part of that great square. Then is this great square from the top, with good and sufficient studs to be drawn slope-wise, narrower and narrower, till it come to the ground, so that the hearth or lowest part thereof may not be above a sixth part to the great square above, on which the Mault is laid to be dried; and this hearth shall be made hollow and descending, and not level nor ascending; and these Kilns do not hold any certain quantity in the upper square, but may ever be according to the frame of the house; some being thirty foot each way, some twenty, and some

some eighteen. There be other Kilns which are made after this manner open and slope, but they are round of proportion; but both these kind of Kilns have one fault, which is danger of fire; lying every way open and apt for the blaze, if the *Maltster* be any thing negligent, either in the bouting of the blaze low and forward, or not sweeping every part about the harth any thing that may take fire, or fore-seeing that no straws which do belong to the bedding of the Kiln do hang down or are loose, whereby the fire may take hold of them, it is very possible that the Kiln may be set on fire; to the great loss and often undoing of the owners.

Which to prevent, and that the *Maltster* may have better assurance and comfort in her labour, there is a Kiln now of general use in this Kingdom, which is call'd a *French Kiln*, being framed of a brick, ashler, or other fire stone, according to the nature of the soyl in which Husbonds and Housewives live: and this *French Kiln* is ever safe and secure from fire, and whether the *Maltster* wake or sleep, without extream wilful negligence, there can no danger come to the Kiln; and in these Kilns may be burnt any kind of fewel whatsoever, and neither shall the smoke offend or breed ill taste in the Malt, nor yet discolour it, as many times it doth in open Kilns, where the Malt is as it were covered all over, and even parboyl'd in smoke, so that of all sorts of Kilns whatsoever, that which is called the *French Kiln*, is to be preferred and only embraced. Of the form or model whereof, I will not here stand to treat, because they are now so generally frequent amongst us, that no Mason or Carpenter in the whole Kingdom but can build the same; so that to use more words thereof were tediousness to little purpose. Now there is another kind of Kiln, which I have seen (and but in the West Countrey only) which for the profitable quaintness thereof, I took some special note of, and that was a Kiln made at the end of a Kitchen Range or Chimney, being in shape round, and made of brick, with a little hollownes narrowed by degrees, into which came from the bottom and midst of the Kitchen-chimney, a hollow tunnel or vault, like the tunnel of a Chimney, and ran directly on the back-side the hood, or back of the Kitchen-chimney; then in the midst of the Chimney where

The perfect
Kiln.

the greatest strength of the fire was made, was a square hole made of about a foot and half every way, with an iron thick plate to draw to and fro; opening and closing the hole at pleasure; and this hole doth open only into that tunnel which went to the Kiln, so that the Malt being once laid, and spread upon the Kiln; draw away the iron plate, and the ordinary fire with which you dress your meat, and perform other necessary business, is sucked up into this tunnel, and so conveyeth the heat to the Kiln, where it dryeth the Malt with as great perfection as any Kiln I saw in my life, and needeth neither attendance or other ceremony more, then once in five or six hours to turn the Malt, and take it away when it is dryed sufficiently: for it is here to be noted, that how great or violent soever the fire be, which is in the chimney, yet by reason of the passage, and the quantity thereof, it carrieth no more than a moderate heat to the Kiln; and for the sinoak, it is so carried away in other loop-holes which run from the hollownes between the tunnel, and the Malt-bed, that no Malt in the world can possibly be sweeter or more delicately coloured: only the fault of these Kilns are, that they are but little in compass, and so cannot dry much at a time, as not above a quarter or ten strikes at the most in one drying, and therefore are no more but for a mans own particular use, and for the furnishing of one settled Family; but so applied, they exceed all the Kilns that I have seen whatsoever.

Bedding of
the Kiln.

When our Master hath thus perfected the Malt-house and Kiln, then next look to the well bedding of the Kiln, which is diversly done according to mens divers opinions: for some use one thing, and some another, as the necessity of the place, or mens particular profits draw them.

But first to shew you what the bedding of a Kiln is, you shall understand that it is a thin covering laid upon the open rakers, which are next unto the heat of the fire, being made either so thin, or so open, that the smallest heat may pass through it, and come to the corn; this bed must be laid so even and level as may be, and not thicker in one place than another, lest the Malt dry too fast where it is thinnest, and too slowly where it is thick, and so in the last seem to be of two several dryings.

It must also be made of such stuff, as having received heat, it will long continue the same, and be assistant to the fire in drying the corn: it should also have in it no moist or dankish property, lest at the first receiving of the fire it send out a stinking smoke, and so taint the Malt; nor should it be of any rough or sharp substance, because upon this bed or bedding is laid the hair-cloth, and on the hair-cloth the Malt, so that with the turning the Malt and treading upon the cloth, should the bed be of any such roughness, it would soon wear out the hair-cloth, which would be both loss and ill Housewifery, which is carefully to be eschewed.

But now for the manner or substance whereof this bedding should be made, the best, neatest, and sweetest, is clean long Rye-straw, with the ears only cut off, and the ends laid even together, not one longer than another, and so spread upon the rafter of the Kiln as even and thin as may be, and laid as it were straw by straw in a just proportion, where skill and industry may make it thin or thick at pleasure, as but the thickness of one straw, or of two, three, four or five, as shall seem to your judgment most convenient; and than this, there can be nothing more even, more dry, sweet, or open to let in the heat at your pleasure; and although in the old open Kilns it be subject to danger of fire, by reason of the quickness to receive the flame, yet in the *French Kilns* (before mentioned) it is a most safe bedding, for not any fire can come near unto it. There be others which bed the Kiln with Matt; and it is not much to be disliked, if the Matt be made of Rye-straw sowed, and woven together according to the manner of the *Indian Matts*, or those usual thin *Bent Mats*, which you shall commonly see in the Summer time standing in Husband-mens Chimneys, where one bent or straw is laid by another, and so woven together with a good strong pack-thread: but these Matts according to the old Proverb (*Most cost, most wor-ship*) are chargeable to be bought, and very troublesome in the making, and in the wearing will not out-last one of the former loose beddings; for if one thread or stick break, immediately most in that row will follow; only it is most certain, that during the time it lasteth, it is

222 2

both

both good, necessary and handsome. But if the *Mat* be made either of Bul-rushes, Flags, or any other thick substance (as for the most part they are) then it is not so good a bedding, both because the thicknes keepeth out the heat, and is long before it can be warmed; as also in that it ever being cold, naturally of it self draweth into it a certain moisture, which with the first heat being expelled in *Smoak*, doth much offend and breed ill taste in the *Malt*. There be others that bed the Kiln with a kind of *Mat* made of broad thin splints of wood wrought Checquer-wise one into another, and it hath the same faults which the thick *Mat* hath; for it is long in catching the heat, and will ever *smoak* at the first warming, and that *smoak* will the *Malt* smell on ever after; for the *smoak* of *Wood* is ever more sharp and piercing than any other *smoak* whatsoever.

Besides, this *W.oden-Mat*, after it hath once bedded the Kiln, it can hardly afterward be taken up or removed; for by continual Heat, being brought to such an extreame dryness, if upon any occasion either to mend the Kiln, or cleanse the Kiln or do other necessary labour underneath the bedding, you shall take up the *Wooden-Mat*, it would presently crack, and fall to pieces, and be no more serviceable.

There be others which bed the Kiln with a bedding made all of *Wickers*, of small wands folded one in another like a hurdle, or such wand work; but it is made very open, every wand at least two or three fingers one from another; and this kind of bedding is a very strong kind of bedding, and will last longest, and catcheth the heat at the first springing, only the *smoak* is offensive, and the roughness without great care used, will soon wear out your hair-cloth; yet in such places where *straw* is not to be got or spared, and that you are compelled only to use *Wood* for your fuel in drying your *Malt*, I allow this bedding before any other, for it is very good, strong, and long lasting. Besides, it may be taken up and set by at pleasure, so that you may sweep and cleanse your Kiln as oft as occasion shall serve, and in the heat and fine keeping of the Kiln, doth consist much of the *House-wives* Art, for to be choakt either with dust, dirt, soot or ashes, as it shews stiffness

thiness and sloth, the only great imputations hanging over a *Huse-wife*, so likewise they hinder the labour, and make the malt dry a great deal worse, and more unkindly.

Next the bedding of the Kiln, our Maltster by all means must have an especial care with what *fewel* (he dryeth the malt; for commonly, according to that it ever receiveth and keepeth the taste, if by some especial art in the Kiln that annoyance be not taken away. To speak then of *fewels* in general, there are of divers kinds according to the natures of soyls, and the accommodation of places in which men live; yet the best and most principal *fewel* for the Kilns, (both for sweetness, gentle heat and perfect drying) is either good Wheat-straw, Rye-straw, Barley-straw or Oaten-straw; and of these the Wheat-straw is the best, because it is most substantial, longest lasting, makes the sharpest fire, and yields the least flame; The next is Rye-straw, then Oaten-straw, and last Barley-straw, which by reason it is shortest, lightest, least lasting, and giveth more blaze than heat, it is last of these white straws to be chosen; and where any of these fail or are scarce, you may take the stubble or after-crop of them when the upper part is shorn away, which being well dried and housed, is as good as any of the rest already spoken of, and less chargeable, because it is not fit for any better purpose, as to make fodder, manure, or such like, or more than ordinary thatching, and so fittest for this purpose. Next to those white straws, your long Fen-rushes being very exceedingly well withered and dried, and all the sappy moisture gotten out of them, and so either safely housed or stacked, are the best *fewel*; for they make a very substantial fire and much lasting, neither are apt to much blazing, nor the smoke so sharp or violent, but may very well be endured: where all these are wanting, you may take the Straw of Pease, Fetches, Lupins or Tares, any of which will serve, yet the smoke is apt to taint, and the fire without prevention dryeth too suddenly and swiftly. Next to these is clean Bean-straw, or straw mixt of Beans and Pease together; but this must be handled with great discretion, for the substance containeth so much heat that it will rather burn than dry, if it be not moderated, and

Of *fewel* for the drying of Malt.

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the smoke is also much offensive. Next to this Bean-straw, is your Furs, Gorfe, Whins, or small Brush-wood, which differeth not much from Bean-straw, only the smoke is much sharper, and tainteth the malt with a much stronger savour. To these I may add Braken or Brakes, Ling, Heath or Broom, all which may serve in time of necessity, but each one of them have this fault, that they add to the malt an ill taste or savour. After these I place wood of all sorts, for each is a like noysome, and if the smoke which cometh from it touch the malt, the infection cannot be removed; from whence amongst the best Husbands hath sprung this Opinion, that when at any time drink is ill tasted, they say straight, it was made of wood-dryed malt. And thus you see the generality of fewels, their vertues, faults, and how they are to be employed. Now for Coal of all kinds, Turf or Peate, they are not by any means to be used under Kilns, except where the furnaces are so subtilly made that the smoke is conveyed a quite contrary way, and never cometh near the malt; in that case it skilleth not what fewel you use, so it be durable and cheap, it is fit for the purpose; only great regard must be had to the gentleness of the fire, for, as the old Proverb is, (*Soft fire makes sweet malt*) so too hasty a fire scorcheth and burneth it, which is called among Maltsters Fire-fang'd; as such malt is good for little or no purpose: therefore to keep a temperate and true fire, is the only Art of a most skilful Maltster.

When the Kiln is thus made, and furnished of all necessaries duly belonging to the same, you Maltsters next care shall be to the fashioning and making of the Garners, Hutches or Hold, in which both the malt after it is dryed, and the Barley before it be steeped, is to be kept and preserved; and these Garners or Safes for Corn are made of divers fashions, and divers matters, as some of Boards, some of Bricks, some of Stone, some of Lime and Hair, and some of Mud, Clay or Loame: but all of these have their several faults; for wood of all kinds breedeth Weevil and Worms which destroy the Grain, and is indeed much too hot: for although malt would ever be kept passing dry, yet never so little overplus of heat withers it, and takes away the vertue; for as moisture rots and

corrupts

corrupts it, so heat takes away and decayeth the substance. Brick, because it is laid with Lime is altogether unwholsome; for the Lime being apt at change of weather to sweat, moisteneth the grain, and so tainteth it; and in the dryest seasons with the sharp hot taste doth fully as much offend it; those which are made of Stone, are much more noysome, both in respect of the reasons before rehearsed, as also in that all Stone of it self will sweat, and so more and more corrupteth the grain which is harboured in it. Lime and hair being of the same nature, carrieth the same offences, and is in the like sort to be eschewed. Now for Mud, Clay or Loame, in as much as they must necessarily be mixt with wood; because otherwise of themselves they cannot knit or bind together; and besides that, the Clay or Loame must be mixt either with chopt hay, chopt straw, or chopt Litter, they are as great breeders of Worms and Vermin as wood is, nor are they defences against Mice, but easie to be wrought through, and so again unprofitable for any Husband or House-wife to use. Besides, they are much too hot, and being either in a close house near the Kilm or the back or face of any other Chimney, they dry the Corn too sore, and make it dwindle and wither, so that it neither filleth the Bushel nor enricheth the Liquor, but turns to loss every way. The best Garner then that can be made both for safety and profit, is to be made either of broken tile-sherd or broken bricks cunningly and even laid and bound together with Plaster of Paris, or our ordinary *English* Plaster, or burnt Alabaster, and then covered all over both within and without, in the bottom and on every side, at least three fingers thick with the same Plaster, so as no brick or tyle-sherd may by any means be seen, or come neer to touch the Corn; and these Garners you may make as big or as little as you please, according to the frame of your house, or place of most convenience for the purpose, which indeed would ever be as neer the Kilm as may be, that the air of the fire in the daies of drying may come unto the same, or else near the backs or sides of Chimneys, where the air thereof may correct the extrem coldness of the Plaster, which of all things that are bred in the earth, is the coldest thing that may be, and yet most dry, and not apt to sweat.

or take moysture, but by some violent extremitie; neither will any worm or vermine come near it, because the great coldness thereof is a mortal enemy to their natures, and so the safest and longest these Garners of Plasters keep all kind of Grain and Pulse in the best perfection.

The making
of Cisterns.

After these Garners, Hutches, or large Keeps for Corn are perfected and made, and fitly adjoynd to the Kiln, the next thing that our *Malsters* hath not look unto, is the framing of the Fatts or Cisterns wherein the Corn is to be steeped: and they are of two sorts, that is, either of Coopers work, being great Fatts of wood, or else of Masons work, being Cisterns made of stone; but the Cistern of stone is much the better: for besides that, these great Fatts of Wood are very chargeable and costly (as a Fatt to contain four quarters of Grain, which is but two and thirty bushels, cannot be afforded under twenty shillings) so likewise they are very casual and apt to mischance and spilling; for, and besides their ordinary wearing, if in the heat of Summer they be never so little neglected without water, and suffered to be over dry, it is ten to one but in the Winter they will be ready to fall in pieces; and if they be kept moist, yet if the water be not oft shifted and preserved sweet, the Fatt will soon taint, and being once grown faulty, it is not only irrecoverable, but also whatsoever cometh to be steeped in it after, will be sure to have the same savour; besides the wearing and breaking of Garths and Plugs, the binding, cleansing, sweetning, and a whole world of other troubles and charges doth so daily attend them, that the benefit is a great deal short of the incumbrance; whereas the Stone-Cistern is ever ready and useful, without any vexation at all; and being once well and sufficiently made, will not need trouble or reparation, (more than ordinary washing) scarce in a hundred years.

Now the best way of making these Malt-Cisterns, is to make the bottoms and sides of good tyle-threads fixed together with the best Lime and Sand, and the bottom shall be raised at least a foot and a half higher than the ground, and at one corner in the bottom, a fine artificial round hole must be

be made, which being outwardly stopt, the Maltster may through it drain the Cistern dry when she pleaseth, and the bottom must be so artificially levelled and contrived, that the water may have a true descent to that hole, and not any remain behind when it is opened.

Now when the model is thus made of tile-shard, which you may do great or little at your pleasure: then with Lime, Hair, and Beatts blood mixed together, you shall cover the bottom at least two inches thick, laying it level and plain as is before shewed: which done, you shall also cover all the sides and top both within and without with the same matter at least a good fingers thickness, and the main wall of the whole Cistern shall be a full foot in thickness, as well for strength and durableness, as other private reasons for the holding the grain and water, whose poise and weight might otherwise endanger a weaker substance. And thus much concerning the Malt-house, and those several accommodations which do belong unto the same.

I will now speak a little in general as touching the Art, skill and knowledge of Malt-making, which I have referred to the conclusion of this Chapter, because whosoever is ignorant in any of the things before spoken of, cannot by any means ever attain to the perfection of the most true and most thrifty Malt-making. To begin then with the Art of making, or (as some term it) melting of Malt, you shall first (having proportioned the quantity you mean to steep, which could ever be answerable to the content of your Cistern, and your Cistern to your floors) let it either run down from your upper Garner into the Cistern, or otherwise be carried into your Cistern, as you shall please, or your occasions desire; and this Barley would by all means be very clean and neatly drest; then when your Cistern is filled, you shall from your Pump or Well convey the Water into the Cistern till all the Corn be drenched, and that the Water float above it; If there be any Corn that will not sink, you shall with your hand stir it about and wet it, and so let it rest and cover the Cistern; and thus for the space of three nights you shall let the Corn steep in the Water. After the three

The manner
how to make
Malt.

nights expired, the next morning you shall come to the Cistern and pluck out the plug or bung-stick which stoppeth the hole in the bottom of the Cistern, and so drain the water clean from the Corn, and this water you shall by all means save, for much light Corn and others will come forth with this drain-water, which is very good Swines-meat, and may not be lost by any good House-wife. Then having drained it, you shall let the Cistern drop all that day, and in the evening with your shovel you shall empty the Corn from the Cistern unto the Malt-floor, and when all is out, and the Cistern cleansed, you shall lay all the wet Corn on a great heap, round or long, and flat on the top; and the thickness of this heap shall be answerable to the season of the year; for if the weather be extreame cold, then the heap shall be made very thick, as three or four foot or more, according to the quantity of the grain: but if the weather be temperate and warm, then shall the heap be made thinner, as two foot, a foot and a half or one foot, according to the quantity of the Grain. And this heap is called of Maltsters a Couch or bed of raw Malt.

In this Couch you shall let the Corn lie three nights more without stirring, and after the expiration of the three nights you shall look upon it, and if you finde that it beginneth but to sprout, (which is called coming of Malt) though it be never so little, as but the very white end of the sprout peeping out, (so if it be in the outward part of the heap or couch) you shall then break open the couch, and in the middest where the Corn lay nearest, you shall find the sprout or Corn of a greater largeness: then with your shovel you shall turn all the outward part of the couch inward, and the inward outward, and make it at least three or four times as big as it was at the first, and so let it be all that day and night, and the next day you shall with your shovel turn the whole heap over again, increasing the largeness, and making it of one indifferent thickness over-all the floor, that is to say, not above a handful thick at the most, not failing after for the space of fourteen daies, which doth make up full in all three weeks, to turn it all over twice or thrice a day, according to the season of the weather, for if it be warm, the Malt must be turned

turned outner; if cool, then it may lie looser, thicker and longer together, and when the three weeks is fully accomplished, then you shall (having bedded your Kiln, and spread a clean hair-cloth thereon) lay the Malt as thin as may be, (as about three fingers thickness) upon the hair-cloth, and so dry it with a gentle and soft fire, ever and anon turning the Malt (as it drieth on the Kiln) over and over with your hand, till you find it sufficiently well dried, which you shall know both by the taste when you bite it in your mouth, and also by the falling off of the Come or Sprout when it is thoroughly dried. Now as soon as you see the Come begin to shed, you shall in the turning of the Malt rub it well between your hand, and scower it to make the Come fall away, then finding it all sufficiently dried, first put out your fire, then let the Malt cool upon the Kiln for four or five hours, and after raising up the four corners of the hair-cloth, and gathering the Malt together on a heap, empty it with the Come and all into your Garners, and there let it lie (if you have not present occasion to use it) for a month or two or three to ripen, but no longer, for as the Come or dust of the Kiln for such a space melloweth and ripeneth the Malt, making it better both for sale or expence, so to lie too long in it doth ingender Weevil, Worms and Vermine which do destroy the Grain.

The drying
of Malt.

Now for the dressing and cleansing of Malt at such time as it is either to be spent in the house or sold in the Market; you shall first winnow it with a good wind either from the Air or from the Fan; and before the winnowing, you shall rub it exceeding well between your hands to get the Come or Sprouting clean away: for the beauty & goodness of Malt is when it is most snug, clean, bright, and likeliest to Barley in the view, for then there is least waste and greatest profit: for Come and Dust drinketh up the Liquor, and gives an ill taste to the drink. After its well rubbed and winnowed, you shall then see it over in a fine sieve, and if any of the Malt be uncleansed, then rub it again into the sieve till it be pure, and the rubbings will arise on the top of the sieve, which you may cast off at pleasure, and both those rubbings from the sieve, and the chaff, and dust which cometh from the win-

nowings should be safe kept; for they are very good Swines-meat, and feed well, mixt either with whey or swillings, and thus after the Malt is rec'd, you shall either sack it up, for special use, or put it into a well cleansed Garner, where it may lie till there be occasion for expence.

Now there be certain Observation in the making of Malt, which I may by no means omit: for though divers opinions do diversly argue them, yet as near as I can, I will reconcile them to that truth which is most consonant to reason, and the rule of honesty and equality.

First, there is a difference in mens opinions, as touching the constant time for the mellowing and making of the Malt; that is, from the first steeping untill the time of drying: for some will allow both Fatt and Floor hardly a fortnight, some a fortnight and two or three daies, and do give this reason.

First, They say, it makes the Corn look whiter and brighter, and doth not get so much the sulling and fowlness of the floor, as that which lieth three weeks, which makes it a great deal more beautiful, and so more saleable: Next, it doth not come or shoot out so much sprout as that which lieth a longer time, and so preserveth more heart in the grain, makes it bold and fuller, and so consequently more full of substance, and able to make more of a little than the other of much more.

These reasons are good in shew, but not in substantial truth: for (although I confess that Corn which lieth least time on the floor, must be the whitest and brightest,) yet that which wanteth any of the due time, can neither ripen, mellow, nor come to true perfection, and less than three weeks cannot ripen Barley; for look what time it hath to swell and sprout, it must have full that time to flourish, and as much time to decay, now in less than a week it cannot do the first, and so in a week the second, and in another week the third; so that in less than three weeks a man cannot make perfect Malt. Again, I confess, that Malt which hath the least Come must have the greatest Kernel, and so be most substantial

stantial; yet the Malt which putteth not out his full sprout, but hath that moisture (with too much haste) driven in which should be expelled, can never be Malt of any long lasting, or profitable for indurance, because it hath so much moist substance as doth make it both apt to corrupt and breed worms, in most great abundance. It is most true, that this hast. made Malt is fairest to the eye, and will soonest be vented in the Market; and being spent as soon as it bought, little or no loss is to be perceived; yet if it be kept three or four months longer (unless the place where it is kept, be like a hor-house) it will be so dank and give again, that it will be little better than raw Malt, and so good for no service without a second drying.

Besides, Malt that is not suffered to sprout to the full kindly, but is stopt as soon as it begins to peep, much of that Malt cannot come at all; for the moistest grains do sprout first, and the hardest are longer in breaking the husk; now, if you stop the grain on the first sprouts, and not give all leisure to come one after another, you shall have half Malt and half Bail. y, and that is good for nothing but Hens and the Hogs-trough. So that to conclude, less than three weeks you cannot have to make good and perfect Malt.

Next, there is a difference in the turning of the Malt, for some (and those that be the most Men-malsters whatsoever) turn all their Malt with the shovel, and say it is more easie, more speedy, and dispatcheth more in an hour, then any other way doth in three; and it is very true, yet it scattereth much, behind unturned, and commonly that which was undermost it leaveth undermost still, and so by some coming too much and others not coming at all, the Malt is of much imperfect, and the old saying made good, *that too much haste maketh waste*. Now, there are others (and they are for the most part Women-malsters) which turn all with the hand, and that is the best, safest, and most certain way; for there is not a grain which the hand doth not remove, and turn over and over, and laies every several heap or row of such an even and just thickness, that the Malt both equally cometh, and equally seasoneth together without defect or alteration; and though he that

hath

hath much Malt to make, will be willing to hearken to the swiftest course in making, yet he that will make the best Malt, must take such convenient leisure, and imploy that labour which cometh nearest to perfection.

Then there is another special care to be had in the coming or sprouting of Malt, which is, that as it must not come too little, so it must not by any means come too much, for that is the grossest abuse that may be; and that which we call come or sprouted too much, is, when either by negligence, for want of looking to the couch and not opening of it, or for want of turning when the Malt is spread on the floor, it comes or sprouts at both ends, which Husbands call *Aker-spired*: such corn, by reason the whole heart or substance is driven out of it, can be good for no purpose but the Swine-trough, and therefore you must have an especial care both to the well tending of the couch, and the turning the Malt on the floor, and be sure (as near as you can) by the ordering of the couch, and heaping the hardest grain inward and warmest, to make it all come very indifferently together. Now, if it so fall out, that you buy your Barley, and happen to light on mixt grain, some being old Corn, some new Corn, some of the heart of the stack, and some of the stiddle, which is an ordinary deceit with Husbandmen in the Market, then you may be well assured, that this grain can never come nor sprout equally together, for the new Corn will sprout before the old, and the stiddle before that in the heart of the stack, by reason the one exceedeth the other in moistness: therefore in this case you shall mark well which cometh first, which will be still in the heart of the couch, and with your hand gather it by it self into a separate place, and then heap the other together again: and thus as it cometh and sprouteth, so gather it from the heap with your hand, and spread it on the floor, and keep the other still in a thick heap till all be sprouted. Now lastly observe, that if your Malt be hard to sprout or come, and that the fault consist more in bitter coldness of the season, than any defect of the corn, that then (besides the thick or close making of the heap or couch) you fail not to cover it over with some thick woollen clothes, as coarse Coverlids, or such like stuff, the warmth

warmth whereof will make it come presently; which once perceived, then forthwith uncloath it, and order it as aforesaid in all points. And thus much for the Art, Order, Skill, and Cunning, belonging to Malt-making.

Now as touching the making of Oats into Malt, which is a thing of general use, in many parts of this Kingdom where Barley is scarce, as in *Cheshire, Lancashire, much of Derbyshire, Devonshire, Cornwall*, and the like, the Art and Skill is all one with that of Barley, nor is there any variation or change of work, but one and the same order still to be observed; only by reason that Oats are more swift in sprouting, and apt to clutter, ball and hang together by the length of the sprout than Barley is, therefore you must not fail but turn them oftner than Barley, and in the turning be careful to turn all and not leave any unmoved. Lastly, they will need less of the floor than Barley will; for in a full fortnight, or a fortnight and two or three daies you may make very good and perfect Oat-malt. But because I have a great deal more to speak particularly of Oats in the next Chapter, I will here conclude this, and advise every skillful House-wife to joyn with mine observations, her own tryed experience, and no doubt but she shall find both profit and satisfaction.

Of Oat-meal.

C H A P. VIII.

Of the Excellency of Oats, and the many singular vertues and use of them in a Family.

Oates although they are of all manner of grain the cheapest because of their generality, being a grain of that goodness never so rich, or never so poor, as if nature had made it the only loving companion and true friend to mankind; yet it is a grain of that singularity for the multiplicity of vertues, and necessary uses for the sustenance and support of the Family, that not any other grain is to be compared with it; for if any other have equal vertue, yet it hath not equal value, and if not equal value, then

then it wants many degrees of equal vertue; so that joyning vertue and value together, no *Husband, Housewife, or House-keeper*, whatsoever hath so true and worthy a friend, as is Oats are.

The vertue of
Oats to
Cattel.

To speak then first of the Vertues of Oats as they accrew to Cattel and Creatures without doors, and first to begin with the Horse, there is not any food whatsoever that is so good, wholesome and agreeable with the nature of a Horse as Oats are, being a provender in which he taketh such delight, that with it he feedeth, travelleth, and doth any violent labour whatsoever, with more courage and comfort, then with any other food that can be invented, as all men know that have either use of it, or Horses: neither doth the Horse ever take surfeit of Oats (if they be sweet and dry) for albeit, he may be well glutted, or stalled upon them with indiscreet feeding, and so refuse them for a little time, yet he never surfeith, or any present sickness will follow after: whereas no other grain but gluts a Horse therewith, and instantly sickness will follow, which shews surfeit; and the danger is oft incurable: for we read in *Italy*, at the siege of *Naples*, of many hundred Horses that died of the surfeit of Wheat; at *Rome* also died many hundred Horses of the plague, which by due proof was found to proceed from a surfeit taken of Peas, and Fitches; and so I could run over all other grains, but it is needless, and far from the purpose I have to handle; suffice it, Oats for Horses are the best of all foods whatsoever, whether they be but only clean thrasht from the straw and so dr. ed, or converted to Oat-meal, and so ground and made into bread. Oats hoyl'd and given a Horse whilst they are cool and sweet, are an excellent food for any Horse in the time of disease, poverty or sickness; for they scour and fat exceedingly.

In the same nature that Oats are for Horses, so are they for the Ass, Mule, Camel, or any other beast of burthen.

If you will feed either Oxe, Bull, Cow, or any Neat whatsoever to an extraordinary height of fatness, there is no food doth it so soon as Oats do, whether you give them in the straw, or clean thrasht from the sheaf, and well winnowed; but the winnowed Oat is the Best; for by them I have seen an Ox, fed to twenty pounds, twenty four pounds, and thirty pounds, which is a most unreasonable reckoning for any beast; only scann, and the tallow hath been precious.

Sheep

Sheep or Goats may likeWise be fed with Oats, to as great price and profit as with Pease, and Swine are fed with Oats either in raw Milt, or otherwise, to as great thickness as with any Grain whatsoever; only they must have a few Pease after the Oats to harden the Fat, or else it will wast, and consume in boyling. Now for holding Swine, which are only to be preserved in good flesh, nothing is better than a thin mange made of Ground-Oats, Whey, Butter-milk, or other ordinary Wash or Swillings, which either the Dairy or Kitchen affordeth; nor is there any more sovereign or excellent meat for Swine in the time of sickness, than a mange made of Ground-Oats and sweet Whey, warmed luke-warm on the fire, and mixt with the powder of Ruddle, or red Oaker. Nay if you will go to the matter of pleasure, there is not any meat so excellent for the feeding & wholsom keeping of a Kennel of Hounds, as the Mange made of Ground-Oats and scalding water, or of Beef-broth, or any other Broth, in which flesh hath been sodden; if it be for the feeding, strengthening, and comforting of Grey-hounds, Spaniels, or any other sort of tender Dogs, there is no meat better than Sheeps-heads, hair and all, or other Entrails of Sheep chopt and well sodden with good store of Oat-meal.

Now for all manner of Poultry, as Cocks, Capons, Hens, Chickens of great size, Turkeys, Geese, Ducks, Swans, and such like, there is no Food feedeth them better than Oats, and if it be in the young Breed of any of those kinds, even from the first hatching or disclosing, till they be able to shift for themselves; there is no food better whatsoever than Oat-meal Groats, or fine Oat-meal, either simple of it self, or else mixt with Milk, Drink, or else new made Urine.

Thus much touching the vertues and quality of Oats or Oat-meal, as they are serviceable for the use of Cattel and Poultry. Vertue of Oats
for man. Now for the most necessary use thereof for man, and the general support of the Family, there is no Grain in our knowldg answerable unto it.

First for the simple Oat it self (excepting some particular Physick helps, as frying them with sweet butter, & putting them in a bag, and very hot applied to the belly or stomach, to avoid Collick or Windiness, and such Experiments) the most special use which is made of them

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Making of
Oat-meal.

is for Males to make Beer or Ale of, which is dith exceeding well, and maintaineth many Towns and Counties: but the Oatmeal which is drawn from them, being the heart and kernel of the Oat, is a thing of much rarer price and estimation; for to speak truth, it is like Salt of such a general use, that without it hardly can any Family be maintained: therefore I think it not much amiss to speak a word or two touching the making of Oatmeal. You shall understand then, that to make good and perfect Oat-meal, you shall first dry your Oats exceeding well; and then put them on the Mill, which may either be Water-mill, Wind-mill, or Horse-mill, (but the Horse-mill is best) and no more but crush or bull them, that is, to carry the stones so large that they may no more but crush the husk from the Kernel: then you shall winnow the Hulls from the Kernels either with the Wind, or a Fan, and finding them of an indifferent cleanness (for it is impossible to hull them all clean at the first) you shall then put them on again, and making the Mill go a little closer, run them through the Mill again, and then winnow them over again, and such Greets or Kernels as are clean hulled, and well cut, you may lay by, and the rest you shall run through the Mill again the third time, and so winnow them again, in which time all will be perfect, and the Greets or full Kernels will separate from the smaller Oat-meal; for you shall understand, that at this first making of Oat-meal, you shall ever have two sorts of Oat-meals, that is, the full whole Greet or Kernel, and the small Dust-oat-meal. As for the coarse Hulls or Chaff that cometh from them, that also is worthy saving; for it is an excellent good Provender for any Plow and labouring Horses, being mixt with either Beans, Pease, or any other Pulse whatsoever.

The virtues of
Oat-meal.

Now for the use and virtues of these several kinds of Oat-meals in maintaining the Family, they are so many (according to the many customs of many Nations) that it is almost impossible to reckon all; yet (as near as I can) I will impart my knowledge, and what I have taken from relation.

First, for the small dust, or meal, Oat-meal, it is that with which all Pottage is made and thickened, whether they be Meat-pottage, Milk-pottage, or any thick or else thin Gravel whatsoever, of whose goodness and wholesomeness it is needless to speak, in that it is frequent with every Experience: Also, with this small meal

antals Oat-meal, is made in divers Countreys for several kinds of very good and wholsome bread, every one finer than another, as your *Anacks*, *Janacks*, and such like. Also there is made of it, both thick and thin Oaten Cakes, which are very pleasant in tast, and much esteemed: but if it be mixed with fine Wheat-meal, then it maketh a most delicate and dainty Oat-cake, either thick or thin, such as no Prince in the world but may have them served to his Table. Also this small Oat-meal mixed with blood, and the Liver of either Sheep, Calf, or Swine, maketh that pudding which is called the Haggas, or Haggas, of whose goodness it is in vain to boast, because there is hardly to be found a man that doth not affect them. And lastly, from this small Oat-meal by oft steeping it in water and cleanting it, and then boyling it to a thick and stiff jelly, is made that excellent dish of Meat which is so esteemed of in the West parts of this Kingdom, which they call Wash-brew, and in *Cheshire* and *Lancashire* they call it Flumery, or Flumery, the wholsomness and rare goodness, nay, the very Physick helps thereof, being such and so many, that I my self have heard a very reverend and worthily renowned Physician speak more in the commendations of that Meat, than of any other food whatsoever. And certain it is, that you shall not hear of any that ever did surfeit of this Wash-brew or Flumery: and yet I have seen them of very dainty and sickly Stomachs which have eaten great quantities thereof beyond the proportion of ordinary meats. Now for the manner of eating this meat, it is of divers diversly used: for some eat it with Honey, which is reputed the best Sauce; some with Wine, either Sack, Claret or White; some with strong Beer or strong Ale, and some with Milk, as your ability, or the accommodations of the place will administer.

Now there is derived from this Wash-brew another coarser meat, which is as it were the Dregs, or grosser substance of the Wash-brew, which is called Gird-brew, which is a well filling and sufficient meat, fit for Servants and men of labour; on the commendation whereof, I will not much stand, in that 'tis a meat of harder digestion, and fit indeed but for strong able Stomachs, and such whose toyl and much sweat both

liberally spendeth evil humours, and also preserveth man from the offence of fulness and Surfeits.

Now for the bigger kind of Oat-meal, which is called Greet, or Corn Oat-meal, it is of no less use than the former, nor are there fewer Meats compounded thereof. For first, of these Greet are made all sorts of Puddings, or Pots, (as the West Country terms them) whether they be black, as those which are made of the blood of Beasts, Swine, Sheep, Geese, Red or Fallow Deer, or the like, mixt with whole Greet, Suet, and wholesome herbs; or else white, as when the Greet are mixt with good Cream, Eggs, Bread-crumbs, Suet, Currants, and other wholesome Spices. Also of these Greet is made the Good-Friday-pudding, which is mixt with Eggs, Milk, Suet, Peuny-royal; and boyl'd first in a linnen bag, and then stript and buttered with sweet Butter. Again, if you roast a Goose, and stop her belly with whole Greet-beaten together with Eggs, and after mixt with the Gravy, there cannot be a better or pleasanter Sauce. Nay, if a man be at Sea in any long Travel, he cannot eat a more wholesome and pleasant meat than these whole Greet boyled in water till they burst, and then mixt with Butter, and so eaten with Spoons, which although Seamen call it simply by the name of Loblolly, yet there is not any meat, how magnificent soever the name be, that is more toothsome or wholesome. And to conclude, there is no way or purpose whatsoever, to which a man can use or employ Rice, but with the same seasoning and order you may employ the whole Greet of Oat-meal, and have full as good and wholesome meat; and as well tasted; so that I may well knit up this Chapter with this approbation of Oat-meal, that the little charge and great benefit considered, it is the very Crown of the Housewives Garland, and doth more grace her Table and her Knowledge, than all Grains whatsoever; neither indeed can any Family or Household be well and thrifely maintained, where there is either scant or wanting. And thus much touching the nature, worth, virtues, and great necessity of Oats, and Oat-meal.

CHAR.

CHAP. IX.

Of the office of the Brew-house, and the Bake-house, and the necessary things belonging to the same.

When our English Housewife knows how to preserve health by wholesome Physick, to nourish by good meat, and to cloth the body with warm Garments, she must not then by any means be ignorant in the provision of Bread and Drink: she must know both the proportions and compositions of the same. And for as much as Drink is in every house more generally spent than Bread, being indeed (but how well I know not) made the very substance of all Entertainment; I will first begin with it, and therefore you shall know that generally our Kingdom hath but two kinds of Drinks; that is to say, Beer and Ale, but particularly four, as Beer, Ale, Perry, and Cider; and to these we may add two more, Mede, and Metheglin; two compound Drinks of Honey and Herbs, which in the places where they are made, as in Wales, and the Marches, are reckoned far exceeding wholesome and Cordial.

Diversities of Drinks.

To speak then of Beer, although there be divers kinds of taste and strength thereof, according to the allowance of Malt, Hops, and Age given unto the same; yet indeed there can be truly said to be but two kinds thereof, namely Ordinary Beer, and March Beer, all other Beers being derived from them.

Strong Beer.

Touching ordinary Beer, which is that, wherewith either Nobleman, Gentleman, Yeoman, or Husbandman, shall maintain his family the whole year, it is meet first that our English Housewife respect the proportion or allowance of Malt due to the same, which amongst the best Husbands is thought most convenient; and it is held, that to draw from one quart of good Malt three Hogsheads of Beer, is the best ordinary proportion that can be allowed, and having Age and good Hops to lye in, it will be strong enough for any good mans drink.

Of ordinary Beer.

Now for the brewing of Ordinary Beer, your Malt being of brewing well ordinary, beer.

well ground, and put in your Mash-fat, and your Liquor of your Lead ready to boyl; you shall then by little and little with Scoops or Pails put the boyling Liquor to the Malt, and then stir it even to the bottom exceeding well together, which is called the Mashing of the Malt, then the Liquor swimming in the Top, cover all over with more Malt, and so let it stand an hour and more in the Mash-fat, during which space you may if you please heat more Liquor in your Lead for your second or small Drink; this done, pluck up your mashing Stroom, and let the first Liquor run gently from the Malt, either in a clean Trough, or other vessel prepared for the purpose, and then stopping the Mash-fat again, put the second Liquor to the Malt, and stir it well together; then your Lead being emptied, put your first Liquor or Wort therein, and then to every quarter of Malt put a pound and a half of the best Hops you can get, and boyl them an hour together, till taking up a Dish-ful thereof, you see the Hops shrink into the bottom of the Dish; this done, put the Wort through a straight Sieve, which may drain the Hops from it into your Cooler, which standing over the Guile-fat, you shall in the bottom thereof set a great Bowl with your Barm, and some of the first Wort (before the Hops come into it mixt together) that it may rise therein, and then let your Wort drop or run gently into the Dish with the Barm which stands in the Guile-fat, and this you shall do the first day of your brewing, letting your Cooler drop all the night following, and some part of the next morning, and as it drops if you find that a black skum or mother riseth upon the Barm, you shall with your hand take it off, and cast it away, then nothing being left in the Cooler, and the Beer well risen, with your hand stir it about, and so let it stand an hour after, and then beating it and the Barm exceeding well together, tun it up into the Hogheads, being clean wash'd and scalded, and so let it purge; and herein you shall observe not to tun your Vessels too full, for fear thereby to purge too much of the Barm away. When it hath purged a day and a night, you shall close up the Bung-holes with Clay, and onely for a day or two after, keep a Vent-hole in it, and after close it up as fast as may be. Now for your second or small drink

drink which are left upon the Grains you shall suffer it there to stay but an hour, or a little better, and then drain it all off also; which done, put it into the Lead with the former Hops, and boyl the other also, then clear it up from the Hops and cover it very close, till your first Beer be Tunned, and then, as before, put it also to Barin, and so Tun it up also in smaller vessels, and of this second Beer you shall not draw above one Hoghead to three of the better. Now there be divers other wayes and observations for the brewing of ordinary Beer; but none so good, so easie, so ready and quickly performed, as this before shewed; neither will any Beer last longer, or ripen sooner, for it may be drunk at a fortnights age, and with last as long and lively.

Now for the brewing of the best March-Beer, you shall allow to a Hoghead thereof; a quarter of the best Malt well ground; then you shall take a peck of Pease, half a peck of Wheat, and half a peck of Oats, and grind them all very well together, and then mix them with your Malt; which done, you shall in all points brew this Beer, as you did the former ordinary Beer; only you shall allow a pound and a half of Hops to this one Hoghead: and whereas before you drew but two sorts of Beer; so now you shall draw three, that is, a Hoghead of the best, and a Hoghead of the second, and half a Hoghead of small Beer, without any augmentation of Hops or Malt.

This March-Beer would be brewed in the months of *March* or *April*; and should (if it have right) have a whole year to ripen in: it will last two, three, or four years; if it lye cool, and endure the drawing to the last drop, though with never so much leisure.

Now for the brewing of strong Ale, because it is Drink of no such long lasting as Beer is, therefore you shall brew lesse quantity at a time thereof; as two Bushels of Northern measure, (which is four Bushels, or half a quarter in the South) at a Brewing, and not above, which will make fourteen Gallons of the best Ale. Now for the mashing and ordering of it in the Mash-fat, it will not differ any thing from that of Beer.

Beer: as for Hops, although some use not to put in any, yet the best Brewers thereof will allow to fourteen Gallons of Ale a good Espen full of Hops, and no more; yet before you put in your Hops, as soon as you take it from the Grains, you shall put it into a vessel, and change it, or blink it, in this manner: Put into the Wort a Handful of Oak-boughs, and a Pewter-dish, and let them lye therein till the Wort look a little paler than it did at the first, and then presently take out the Dish and the Leaves, and then boyl it a full Hour with the Hops, as aforesaid, and then cleanse it, and set it in vessels to cool; when it is milk-warm, having set your Barm to rise with some sweet Wort, then put all into the Guile-fat, and as soon as it riseth, with a Dish and Bowl beat it in, and so keep it with continual beating a day and a night at least, and after tun it. From this Ale you may also draw half so much very good middle Ale, and a third part very good small Ale.

Brewing of
Bottle-Ale.

Touching the brewing of Bottle-Ale, it differeth nothing at all from brewing of strong Ale, onely it must be drawn in a larger proportion, as at least twenty Gallons of half a quarter; and when it comes to be changed, you shall blink it (as was before shewed) more by much than was the strong Ale, for it must be pretty and sharp, which giveth the life and quickness to the Ale: and when you tun it, you shall put it into round Bottles with narrow mouths, and then stopping them close with Cork, set them in a cold Cellar up to the waste in Sand, and be sure that the Corks be fast tied in with strong Packthread, for fear of rising out, or taking vent, which is the utter spoyl of the Ale.

Now for the small drink arising from this Bottle-Ale, or any other Beer or Ale whatsoever, if you keep it after it is blink'd and boyled in a close vessel, and then put it to Barme every morning as you have occasion to use it, the Drink will drink a great deal the fresher, and be much more lively in taste.

Of making
Perry or Cider.

As for the making of Perry and Cider, which are Drinks much used in the West parts, and other Countries well stored with fruit in this Kingdom; you shall know, that
your

your Perry is made of Pears only, and your Cider of Apples; and for the manner of making thereof, it is done after one fashion, that is to say, After your Pears and Apples are well pick'd from the stalks, rottenness, and all manner of other filth, you shall put them in the Press-mill, which is made with a Mill-stone running round in a Circle, under which you shall crush your Pears or Apples, and then straining them thorow a bag of hair-cloth, tun up the same, (after it hath been a little settled) into Hogheads, Barrels, and other close vessels.

Now after you have prest all, you shall save that which is within the hair-cloth bag, and putting it into several vessels, put a pretty quantity of Water thereunto, and after it hath stood a day or two, and hath been well stirred together, prest it also over again, for this will make a small Perry or Cider, and must be spent first. Now of your best Cider, that which you make of your Summer or sweet fruit, you shall call Summer, or sweet Cider or Perry, and that you shall spend first also; and that which you make of the Winter and hard Fruit, you shall call Winter, and sour Cider or Perry, and that you may spend last, for it will endure the longest.

Thus after our *English House-wife* is experienc'd in the brew- Of Baking.
ing of these several drinks, she shall then look into her Bake-house, and to the making of all sorts of Bread, either for Masters Servants, or Hinds, and to the ordering and compounding of the meal for each several use.

To speak then first of meals for Bread, they are either simple Ordering of
or compound; simple, as Wheat, and Rye; or compound, as Meal.
Rye and Wheat mixt together; or Rye, Wheat and Barley mixt together: and of these the oldest meal is ever the best, and yieldeth most, so it be sweet, and untainted; for the preservation whereof, it is meet that you cleanse your meal well from the Bran, and then keep it in sweet vessels.

Now for the baking of Bread of your simple meals, your best Baking Man-
and principal Bread is Manchet, which you shall bake in this chers.
manner: First, your Meal being ground upon the black stones,

if it be possible, which makes the whitest flower, and boulded through the finest boulding cloth, you shall put it into a clean Kimnel, and opening the flower hollow in the midst, put into it of the best Ale Barm, the quantity of three pints to a bushel of meal, with some Salt to season it with; then put in your Liquor reasonable warm, and knead it very well together with both your hands, and through the brake; or for want thereof, fold it in a cloth, and with your feet tread it a good space together, then letting it lie an hour or thereabouts, to swell, take it forth, and mould it into Manchets round and flat, scotch them about the waste to give it leave to rise, and prick it with your knife in the top, and so put it into the Oven, and bake it with a gentle heat.

To bake the best Cheat Bread, which is also simply of Wheat onely, you shall after your meal is drest and boulded through a more coarse boulder than was used for your Manchets, and put also into a clean Tub, Trough or Kimnel, take a sower Leven, that is, a piece of such like Leven saved from a former batch, and well fill'd with Salt, and so laid up to sower; and this sower Leven you shall break into small pieces into warm water, and then strain it; which done, make a deep hollow hole, as was before said, in the midst of your flower, and therein pour your strained liquor, then with your hand mix some part of the flower therewith, till the liquor be as thick as a Pancake batter, then cover it all over with meal, and so let it lie all that night, the next morning stir it, and all the rest of the meal well together, and with a little more warm water, barm, and salt to season it with, bring it to a perfect Leven, stiff and firm; then knead it, break it, and tread it, as was before said in the Manchets, and so mould it up in reasonable big Loaves, and then bake it with an indifferent good heat: and thus according to these two examples before shewed, you may bake Levened or unlevened Bread whatsoever whether it be simple Corn, as Wheat or Rye of it self; or compound Grain, as Wheat and Rye, or Wheat and Barley, or Rye and Barley, or any other mixt white Corn; only because Rye is a little stronger Grain than Wheat, it shall be good for you to put your water a little hotter than you did to your Wheat.

FOR

For your own Bread, or Bread for your hind-servants, which is the courtest Bread for mans use, you shall take of Barley two bushels, of Pease two pecks, of Wheat or Rye, a peck, a peck of Mault : these you shall grind all together, and dress it through a Meal sieve, then putting it into a sower trough, set Liquor on the fire, and when it boyls, let one put in the water, and another with a mash rudder stirr some of the flower with it after it hath been seasoned with salt, and so let it be till the next day, and then putting to the rest of the flower, work it up into stiff Leven, then mould it, and bake it into great Loaves with a very strong heat ; now if your trough be not sower enough to sower your Leven, then you shall either let it be longer in the trough, or else take the help of a sower Leven with your boyling water : for you must understand, that the hotter your Liquor is, the less will the smell or rankness of the Pease be perceived. And thus much for the baking of any kind of bread, which our *English House-wife* shall have occasion to use for the maintenance of her Family.

As for the general Observations to be respected in the Brew-House, or Bake-house, they be these : First, that your Brew-house be seated in so convenient a part of the house, that the smoke may not annoy your other more private rooms ; then that your Furnace be made close and hollow for saving fewel, & with a vent for the passage of smoke, lest it taunt your Liquor ; then that you prefer a Copper before a Lead : next, that your Mash-fat, be ever nearest to your Lead, your cooler nearer your Mash-fat, and your Guil-fat under your cooler, and adjoyning to them all several clean tubs to receive your Worts and Liquors : Then in your Bake-house, you shall have a fair boulting-house, with large Pipes to boulst Meal in, fair Troughs to lay Leven in, and sweet Safes to receive your Bran ; you shall have Boulsters, Searfes, Ranges, and Meal-sieves of all sorts, both fine and coarse ; you shall have fair Tables to mould on, large Ovens to bake in, the soales thereof, rather of one or two intire stones, than of many bricks, and the mouth made narrow, square, and easie to be close covered : As for your Peels, Cole-rakes, Maukings, and such like, though they be necessary, yet they are of such general

ral use they need no further relation. And thus much for a full satisfaction to all the *Husbands* and *Housewives* of this Kingdom, touching Brewing, Bakeing, and all whatsoever else appertaineth to either of their Offices.

The End of the English House-wife.

FINIS.

THE INRICHMENT Of the Weald of Kent.

O R,

A Direction to the *HUSBANDMAN*,

For the true Ordering, Manuring, and Inriching of all the Grounds within the *wealds* of *Kent*, and *Sussex*; and may generally serve for all the Grounds in *England* of that Nature: As

- 1 *Shewing the nature of Wealdish Ground, comparing it with the Soyl of the Shires at large.*
- 2 *Declaring what Marle is, and the severall sorts thereof, and where it is usually found.*
- 3 *The profitable use of Marle, and other rich manuring, as well in each sort of Arable Land, as also for the encrease of Corn and Pasture through the Kingdom.*

Painfully gathered for the good of this *Island*, by a Man of great Eminence and Worth; But Revised, Enlarged, and Corrected with the consent, and by conference with the first Author.

By *G. Markham.*

L O N D O N,

Printed for *George Sawbridge*, at the Sign of the Bible on
Ludgate Hill. 1675.

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A Division of the HOSBARDIAN

2. The results of the study are consistent with the findings of other studies on the effects of stress on the immune system.

Points to be noted for the good of this



TO THE

Honourable Knight,
Sir GEORGE RIVERS of Chafford,
in the County of Kent.

SIR,

H Ad I no Scale (more than this bare and plain moulded Epistle,) by which to come to your worthy Ears, yet in respect of the honest Livery which it carries, (being necessary and husbandly Collections, especially gathered for the Country and Soyl wherein you live) I know it cannot chuse but find both favour and mercy in your acceptations; but when I call into my consideration the great worthiness of your expence in this and all other the like affairs, which tend to the general benefit of the Common-wealth, and weigh the Excellency of your Wisdom, Judgement, Bounty, and Affection unto Hospitality (which giveth both strength and advancement to Projects of this nature) I could not but take unto my self a double encouragement, and boldly say unto this Work which I offer unto your goodness, Go and approach with all thy sweetness before him, he that so perfectly knows all which thou canst or would'st discover; he that is able both to correct and amend any thing that is imperfect in thee, He, for Vertues sake, will never forsake thee. Believe me (Worthy Sir) should this Subject wish it self a Patron, I do not think it could wish beyond you; for you are a Volume full of

The Epistle Dedicatory.

at what of which it Treateth: Witness your Tears, your Supportation of the Poor, and your continual Employment; with any of which there is not (of your rank) a second living in your Country, to walk hard in hand with you. Being then [dear Sir] the oldest and best Friend to your Country, forsake neither it, nor this that comes to serve it; and though in this Glass, some lineaments may appear imperfect, yet by the help of your Favour, (though little be exact, or most excellent) nothing shall be gross or unworthy the survey of your worthier Patience. And so I rest,

Yours to be commanded,

Gervase Markham.



A Discourse of the Weald of KENT;

And a Comparifon of Arable Lands therein, with the other parts of the Shire. Together with fome neceffary Counfels for the Ordering and Inriching of the Marleable Lands in the Weald, as generally in any part of this Kingdom.

TH: Weald of *Kent* is the lower part of that Shire, lying on the South fide thereof, and adjoyneth to the Weald of *Suffex*, to the Weft. Further Additions.

The Weald both in *Kent* and *Suffex*, was fometimes all (or the moft part) Woody, Wild, and (in the firft times) uninhabited, and from thence took the name of Weal from the Saxon word *Weale*, or *Yeale*, or *Weald*, which fignifieth a Woody Country, or Forreft like ground. The *Brittains* called it *Andred*, which fignifieth *Greatnefs* or *Wonderful*, and in Latine it was called *Salus Andred*, (that is to fay) the Chafe or Forreft of *Andred*, by reason of the great Circuit or large Bounds thereof.

Touching the true boundary or limits of this Weald; there have been divers Opinions, and moft of them various, and much differing both in place and quantity, but that which is the neareft and beft allied unto truth both according to the Opinions of *Afferius Menevenfis*, *Henry of Huntingdon*, and others of moft credible report, is, that it extendeth from the City of *Wincheffe* in *Suffex* an hundred and twenty miles in length towards the Weft; and thirty miles in breadth towards the North. Now although this report be moft agreeing unto verity, yet who knows not that Curiofity may raife up many Objections to withstand it, and therefore Mr. *Lambert* in his *Perambulation of Kent*; hath prefcribed the beft and moft infallible way to find out the true and certain

certain bounds of this Weald, to be only by Jury, or the Verdict of twelve men impannelled for that purpose, either in case of controverſie, or other particular ſearch; and this hath been in theſe later times brought forth moſt plentifully: for it hath been found by divers late Verdicts, upon ſpecial and moſt neceſſary occaſions, than the Weald of *Kent* is truly, Mr. *Lamberts* ſecond ſtep in his Perambulation of *Kent*, reaching from *Wincheſey* in *Suſſex*, and that Hill there, unto the top of *Rivers Hill* in *Kent*; and neither farther towards *London*, nor ſhorter towards *Tunbridge*; which agreeth ſo perfectly with the former limitations, that both may be received as moſt true and ſufficient.

This Weald was for many years held to be a Wild D-ſart, or moſt unfruitful Wilderneſs (as write the Authors before mentioned) and indeed ſuch is the nature and diſpoſition of the Soyl thereof to this very day: for it will grow to trieth or wood, if it be not continually manured and laboured with the plough, and kept under by tillage; ſo as it may truly be ſaid of it, *Inculte reparantur vomere Sylva*. It is throughout (except in very few places adjoining to Brooks or Rivers) of a very barren nature, and unapt either for paſturage or tillage, until that it be holpen by ſome manner of comfort, as dung, marle, freſhearth, fodder aſhes, or ſuch other reſreſhings; and that ſeemeth to have been the cauſe for which in old time it was uſed as a Wilderneſs, and kept for the moſt part with Herds of Deer, and droves of Hogs, as is ſpecified in divers hiſtorical relations.

And as there be yet remaining in *Suſſex* divers great Forreſts and ſundry Commons or Waſts, having 5 or 6 miles in length, which for the moſt part are not fit to be manured for Corn, and yieldeth but little profit in Paſture; ſo have there been alſo in *Kent* (within our memory) a great number of Woody and overgrown ground, converted of late, even after ſuch a manner as in the ſaid Perambulation is teſtified; where it is ſaid, That although the Weald of *Kent* belonged to ſundry known Owners long ſince, yet was it not then allotted into particular Tenancies, as the other parts of the Shire were; but it was in proceſs of time, by little and little gained, as men were contented to inhabit there, and to rid it of the wood. And hereof it is alſo, that beſides ſundry whole Pariſhes which be named Dens or low places,

places, as *Tenterden*, *Malden*, *Bensden*, and sundry others, there be moreover many smaller portions almost in every part of the Weald of Kent, which be likewise called Dens; as the Den of *Cranebrook* in *Cranebrook*, the Den of *Hawkhurst* in *Hawkhurst*, and such others; the which (as it seemeth) were at the first undertaken to be manured by sundry particular persons, whose names were then taken for those very Dens, and continued many years together, as by ancient evidences it doth yet appear, howsoever the age of long time hath now almost worn and consumed them all out of knowledg. Neither doth the Weald of Kent contain so many great Manors or Courts (for the proportion of the largeness) as the rest of the Shire doth, but was appertaining, for a great part thereof, to sundry of those Manors which do lie at large dispersed thorow the Shire, whereof each one had a great portion in the Weald, which both in the Book of *Dooms-Day*, and in sundry the Court-Rolls, and Rentals, passeth by the name of Weald, and *Silva Porcorum*, or Swine gats, which were granted to divers of the Farmers and owners of sundry Tenancies which did belong unto those Dens and other Lands within the Weald.

And albeit these Dens be for the most part good large portions of Lands, that be now broken into many several posseltions, so as the same one Den sufficeth twenty Housholders at this day, yet it is very likely that each man at the first had his several Den wholly and unbroken, whereof he and his posterity beareth name, until that the same was by the Custome of *Gavel-kind*, by sale or by exchange divided and distributed amongst others into parts, as we do now see them. But howsoever this Weald be of it self unfruitful (as I said) and of a barren Nature, yet so it hath pleased the Providence of the Almighty to temper the same, that by the benefit of Marle or Marle (as it is commonly called) it may be made not only equal in fertility with the other Grounds of the Shire, as well for Corn as Grass, but also superior to the more and greater part of the same. The which manner of bettering the ground is not now newly discovered, but was the ancient practise of our forefathers many years ago, as by the innumerable Marle-Pits digged and spent so many years past, the

The use of
Marle is an-
cient.

Trees

Marling was discontinued, and is now revived.

Trees of 200, or 300 years old, do now grow upon them, it may most evidently appear; Besides the which, we have mention of Marle in Books of Gainage or Husbandry, that were written in the daies of K. *Edward* the 2d. or before, howbeit the same manner of tillage, by means of the Civil Warrs, maintained many years as well in the time of the Barón Warrs, as of the Warrs between the House of *Tork*, and the Family of *Lancaster*, was so given over, and gone out of use, until these thirty or forty years, that it may be said to have been then newly born and revived, rather than restored, because the very true art of enriching the ground by Marle, seemeth to lie hidden in part, as yet not to be discovered to the full: for in this short time we have seen many Arable grounds, which for sundry years after the marling of them have plentifully born Wheat and other grain, to be now become unfruitful, and so will they continue, albeit they should be now marled again. And this cometh to pass by the ignorance of the right manner of ordering the Marle, which is as strong and cheerful as ever it was before, howsoever it worketh not this natural effect, through the unskilfulness of the Husbandman, that both wasteth the Marle, and loseth withall his time, his labour, his cost, and the profit of his ground. I cannot deny but a man shall see some grounds of nature fit to take Marle, and of situation so near to Marl-pits long time opened, that they might be marled plentifully with little charge, and have been heretofore marled indeed, and yet the same to lie now unploughed, and not only barren of themselves, but also unapt for marle, & incapable of amendment by tillage: But I must say withall, That albeit the men in those former Ages had the right ordering of Marle, yet were they not all good Husbonds alike, neither doth the field joy alike under the Farmer, and under the very Owner of the same, the one seeking the very uttermost gain that may be made during his short interest, and the other endeavouring to perpetuate his commodity, even to the end of his estate, which hath no end at all: so that through unskilfulness of the one, and greediness in others, the ground may sooner be crammed to death with Marle, then it shall be made the fatter by it. The reason whereof I will reserve until that I have cause to teach in particular

cular after what manner and measure the ground is to be marled. In the mean while I will open the nature and condition of this Wealdish ground, comparing it with the soil of the Shire at large, and afterward declare unto you what the Marle is, and what sorts thereof there be usually found in the Weald of Kent, and lastly enter into the true and profitable use thereof, as well in each sort of arable Land, as also for the increase of Corn and Pasture through the Kingdom.

The arable ground of this Weald hath commonly a fleet and shallow mould to be turned up by the Plough, so as in many places the dead earth or mould is within three inches of the face of the ground, and in the best places, the good mould exceedeth not six inches in depth at the most; and therefore it wanteth convenient substance to nourish Corn any long time, but will faint and give over after a crop or two; for the which reason also, it cannot yield any sweet or deep grass. Besides this, the Weald hath many copped or hilly grounds, out of which there do many Quits or Springs of water issue that make it cold and barren; and from these hillocks, the best part of the good mould is washed down into the Water-courses and Dikes that be made to divide and drain the Land. Furthermore, the Weald is divided into many small inclosures, the biggest sort (for the most part) of which, are between sixteen Acres and twelve in quantity, and thereby hath it many Hedges and Trees, which in unreasonable weather do keep both the Sun and Wind from the Corn, so as for want of that succour and comfort, it groweth, & many times rotteth in the earth, so that it carneth not nor careth, nor prospereth not kindly many times. And these small Closes are caused by this, that men are not able to marl any great part or quantity of ground at once; and having marled a little, they are desired to sow it with Corn; for the preservation whereof, as also for draining it, they are enforced to make so many and small severals: for all which reason it is plain, that there is little good arable Land there, and rarely any good Pasture, those only places excepted, which are amended by irrigations of floods, which there is called flowing and over-flowing. Contrariwise, the arable land of the Shire at large, hath a deep and fat

E e e e mould

mould of good earth, that is able to bear five or six good Crops together, without intermillion; and after three or four years rest, will do the like again, and may so interchangeably keep that course for ever: yea, there be many grounds that are sowed without ceasing, because the mould is so deep, that when the upper part thereof beginneth to faint and be weary, men can add some strength of Cattel, and with the Plough go deeper, and fetch up a fresh mould that will continue for a long season. Furthermore, this arable ground is a hollow dry-ground for the most part on a deep Clay, that by tillage and the weather, will become dry and spongy, so as the rain there washeth in the fat of the earth, the rather because it is not so hillish and sliding as the Weald, but more level, even and champion also, by which the Sun and Wind do dry the Corn, and do make it earn or ear well, and yeld a purer flower than that which is sobbed in wet, and hath a long time lien before it be dried again. But forasmuch as the great odds between these two sorts of grounds, may be made even by the help of *Marl*, if it be rightly ordered, as I said, I will shew you what it is, and how many sorts thereof be found in this Weald of our Countrey, *Marl* is indeed, as it is in name, the fat or (marrow) of the earth: for so did the *Germans*, and so did our elders the *Saxons* term it, of the word *Marize* which we found *Marrow*, and thereof we call it *Marling*, when we bestow that fat earth upon our lean ground. *Pliny* saith, that the *Britains* (meaning us) did use to amend their Land with a certain invention which they called *Mirga*, that is, the fat of the earth, and it is to be seen in *Conradus Heresbachii*, that the *Germans* do use it to the same end; & do call it by the same name till this very day: it is therefore a fat, oylie and unctuous ground lying in the belly of the earth, which is of a warm and moist temperature, and so most fertile; seeing that heat and moisture be the father and mother of generation and growth; howbeit this is not a pure and simple marrow (as that which lieth in our bones) but a juyce or fat liquor mingled with the earth; as is the fat which lieth mixed and dissolved in our flesh, so as the one may be drawn away, and the other remain as it shall anon appear unto you.

Four sorts of
Marle..

Four sorts of *Marle* be found in this Weald, known asunder by the difference of colours, and thereby also differing in degrees

of

of goodnes one from the other: for there is a gray, a blew, a yellow, and red Marle, all which be profitable, if they be cartily and fat, or slippery as soap: and most times little worth, if they be mixed with sand, gravel, or stone. So the blew is reputed the best, the yellow the next, the gray the next, and the red less durable then the other three; and yet it is thought the red to be the better, if it be found upon the blew, or others. These Marls do lie in veins or flowers, amongst those hillocks or cropped grounds most commonly, whereof I have spoken, and do oftentimes shew themselves at the foot of the hill, or about the mid-way, between the foot and the top thereof: some of them have over them a cover of ground, which we call Cope, not exceeding seven or eight foot in depth, some lie deeper, and other some do arise, as namely, where the ground lieth not high, and the Marle commonly very good; and there is in diverse level grounds good Marle.

And as Marle is for the most part of these four colours, so is Four sorts of
arable ground for the most part of these four sorts following; Ground.
that is to say, either a cold, stiff and wet clay which is either the Cope of the Marle, or lieth near unto it, and is therefore commonly called, *the Marle Cope ground*, or a Hazel Mould, which I count to be one of the Wealdish Moulds, being a compound Mould, and very good for Marle, and will quit the cost very well. Then there are two sorts of sandy Mould, the one being a reasonable good kind, but not equal to the Hazel Mould. For you shall have in divers places of the Weald, this Hazel Mould to bear two or three good crops of Wheat, being Summer fallowed together, which you shall hardly have of any sandy ground without mending: but as I said of the better sort of these two kinds of sandy moulds, you have commonly very rich Wheat, being well Marled, which is not so barren as the other; but this last kind of sandy Mould is a very barren kind of ground, and hath a very fleet Mould, and you shall have very Heath grow upon it in divers places, and yet being ordered, as followeth, with Marle, will bear both good Corn and Pasture. And now that we may the better understand how to Marle and Manure

every of these sorts by it self, you must know that the Hazel ground being dry, and not subject to Winter-springs, or tears of water; (for which, some call such, A whining or weeping ground) is to be handled thus.

The ordering
of the Hazel-
Mould.

First, Plough it as deep as you can; with the strength of eight beasts at the least; and be not afraid to Plough up some part of the dead earth that lieth under the upper good Mould: for the Sun, the Rain, the Wind, and the Frost, will in time mellow and amend it; and besides that, the Mould will be the deeper for a long time after, and thereby keep it self the longer from being stiffened with the Marle. Then you may bestow 500 Cart-loads (as we call them) of Marle upon each Acre thereof, every load containing 10 or 12 bushels of eight gallons, and each Acre containing 160 rods of 16 foot and half to a rod. Then also you may chuse whether at the first breaking up you will sow it with Oats, to kill the grass, or else first Marl it, and sow it with Wheat, or otherwise Summer-fallow it in the May after the Oats, and then Marl it, and sow it with Wheat. Upon that fallow or gratten, (as we call it) you shall do well to sow it with Pease, and at *Michaelmas* following, to sow that Pease-thubble or gratten with Wheat again, which also will be the better, if the Summer wherein it carried Pease, were moist; because the Pease being rich and thick, to destroy the Grass, that together with the Washing of the fallows by rain, doth greatly consume the heart and vertue; or, as we call it, the state of the ground. But if that Summer were dry, then is a fallow best, because the Sun with his heat doth much good to the ground, and inableth it the better to bear out the weather in the Wheat season ensuing. If you like to sow it, as I said, with Pease, sow them as early and timely as you may, for they will be so much the sooner harvested, and then also you may Plough or stir your gratten the sooner, whereby it will be the better hardened to bear out the weather in the time of sowing of your Wheat: but I doubt, Pease doth somewhat stiffen it. Two bushels of Wheat do suffice for the sowing of an Acre hereof, except it be for the first crop, after the new breaking up

of the ground; during which time, there is found a Worm, called an *Emble*, which in *French* signifieth Corn in the ground, being of colour yellow, and of an inch in length, and will eat some part of the Corn; but if you sow it thick, it will be both small eared, and thick and slender of straw, which the Rain and wind will beat and hurl down; and then it will scarcely rise again; or if it do, yet through the nearness of the shadow of the Trees and Hedges; that in so small closes be many, it will rather rot for want of drying, then come to maturity, that is, to perfect hard, and full grown Corn. After your first Marling, you must carefully fore-see, that you plough not the ground either with deep or broad Furrows, but fleet and narrow, lest you cast your Marle into the dead mould; for Marle differeth much from Dung in this behalf; Dung spendeth it self upward, and howsoever deep it lie, the vertue thereof will ascend: but Marle (as saith Sir *Walter Henly*, in his Husbandry) sendeth his vertue downward, and must therefore be kept aloft, and may not be buried in any wise.

Furthermore, if your ground be Hilly or Coppied, it shall be fit that you make your Ridges 7. or 8. foot broad at the least; for in such falling Lands, the more broad Furrows you make, as you must make many, where you make Ridges, the more of your Marl shall be washed, and carried into the bottoms. It is good also to draw a cross or quarter-Furrow, and opening the ends of your Land-Furrows stopped, into it, to leave the other ends of your Furrows, that the Water-shoot run not all the length of the field.

Again, This ground will alwaies be sown under-furrow, and that also before *Michaelmas*, if the season will so permit; for this ground (if it be well husbanded) will be mellow and hollow, or loose; whereby through Rain and Frost, it would sink down from the root of the Wheat, if it should be sown above Furrow, the which being uncovered, must needs be bitten and killed with the cold.

It is also very fit that you harrow not this sort of ground too small, but that you leave the clods as big as a bowl, the which being mouldred with Snow and the Frost, will both cover and keep

keep warm what is underneath. Moreover, it shall be good, that upon some fair and dry day, in the beginning of March, you put your Flock of Sheep into your Wheat, that with their trampling upon it, the Corn may be well, and fast closed with the Earth, yea, and presently after (if it will bear foot) you may roul it as you do Barley, whereby both the Clods shall be broken, and the Gratten or Stubble shall be more even and ready for the Mower, Generally you must understand, that after you have bestowed your Marle in the field, you ought to let it lie unspreed abroad, untill you be ready to plough, and then immediately after the spreading of it, turn it into the ground with the Plough; for otherwise, if it should lie long spread in the field, the Sun will spend no small part of the fatness thereof, although I know many desire it, because it will be the smaller being burned with the Sun; which I like not. And therefore also no good Husband will carry and spend his dung in the time of Summer, except he do presently withall plough it into the ground; for although the mould of the arable Land it self will take good, if it be turned to the Sun, which will both dry and fasten it, yet the matter fareth far otherwise with the Marl, from which if the Sun shall draw and suck the fat moisture that maketh the Land fertile, more than becometh it (as *Columella* speaketh of the worst sort of ground) *Solum siccum, pariter & densum & marcum, quod sive exerceatur, sive cessat colono refugiendum est.* It becometh (saith he) a dry, thick, and lean Clod, which whether it be tilled or laid to rest, must be forsaken of the Husbandman as unprofitable. And now your Hazel mould being thus marled, plowed, sown, and manured, you may not charge with Wheat above twice, and then it must rest five or six years together; all which time it will bear a very good and sweet Pasture, will set with a white Clover, or three leaved grass, most bating and profitable both for Sheep and Bullocks.

After those years ended, it will grow to some Moss, or will peradventure cast up Broom; and then it is time to break it up, and sow and handle it as before, for two other Wheat-seasons or crops, leaving it a Wheat-gratten or stubble, rather than with an Oat-

Oat-gratten or stubble, which burneth the Land being Marled. Being thus interchangeably sowed and rested, your Hazel mould will continue good Arable and Pasture, by the space of thirty years together; whereas if it should be continually sowed; fix, or seven, or more years together without rest, it will become utterly unsuited both for Corn and Cattel also. Neither will it any thing avail to Marle it over again, when it is so decayed, because the former Marl having his juyce exhausted by continual Tillage, whereof the Corn sucketh one part, and the Sun, Wind and Weather dry and wasteth the rest, is but a dead Clod (as I said) that is not capable of new Marl to amend it, nor casteth any profitable grasse at all. For proof hereof, I my self have seen, that the common Earth of High-waies, by treading of Cattel, washing of Rain, and the drying of the Sun and Weather, lay separated from the natural juyce which it had in the pit, and spreading it upon the ground, I saw that the Land was not only not amended; but much the worse by it.

And now for an end of handling this sort of Hazel ground; If it shall appear unto you that five hundred Loads of Marl upon the Acre, have clanged, stiffened, and too fast bound your Land (as indeed the nature of Marl is to bind and to stiffen) then take you some of these waies to help it: Either rest it four or five years; or fodder upon it before you bring it up with so many Cattel as you may; or take the uppermost part of your Ditches or Fore-lands, or wast places of your fields which you may mingle with Dung, and which, before you sow your Wheat, you may lay upon your fallow, and stir it in with your plough; and by this you shall both loosen your Marl, and refresh your ground: so that within forty years the mould of your ground will clean eat up and swallow the Marl that you lay upon it; and then become hungry, and is capable of Marl again as it was before at the first.

And by this also you may see the very cause for which it is good, not to sow your marled land continually, but to pasture it by turns, and so give it rest; namely, because the continual plowing doth exhaust and spend the fat of the Marl, leaving the drossie, dry, and fruitfull parts thereof, to lie and cover the face of your

your ground: whereas Pasturage, through the dunging, treading, and foddering of Cattel, doth encrease a new mould, which mingling it self with the dead mould, doth in the end give some life and heart unto it. And therefore these Farmers and Owners that have been at the cost to marl their ground, and will not forbear to till it, but hastening to raise their charge, do thereby utterly strike it with barrenness, are like to *Aesop's* man, who having a Hen that layed him every day a golden Egg, and being greedy to have all the gold at once, did therefore kill the Hen, thinking to have found her belly full of gold, and so was both defrauded of that he looked for, and lost also what he had before. Hitherto of the nature, ordering and marling of this hazel ground. Generally now for the continual fallowing and stirring thereof, you must understand, it may neither be fallowed wet, lest it answer more Grass than Corn; nor yet so dry, that the dead bottom swell up, as in great drouth it will, and swallow the good mould that lieth above: and therefore bind not your self to any precise time of any Month, but the opportunity either in *May* or *June*, as you shall find the weather to have prepared it for your desire. In the like temper you ought to stir it after a shower, after Saint *James* his day, or in the end of *July*, for so will it be dry and hard before the time of sowing: where if it be stirred later, every small Rain will distemper it into Dirt or Mire, by reason of the tenderness thereof, and then can you not fitly bestow your seed upon it.

The ordering
of the Marle
Cope ground.

The Marle Cope ground followeth, which is most commonly (as I said) a stiff, wet, cold Clay, and not so fit as the former to be Marled for Corn, except in some few fleet places thereof, but yet it may serve for Pasture or for Oates; such of them as be marled, must be fallowed fleet or shallow, lest the Marle become drowned in the wet: then being marled, they may in dry Summers, and not over moist Countries) bear Wheat in some mediocrity. Three hundred Loads at the most of Marle are sufficient for an Acre of this kind, and two bushels and a half of Wheat will sow the same, which must be cast above furrow, fourteen or twenty daies before *Michaelmas*. It requireth, round, high and narrow Ridges, and that the

the water furrows be stricken somewhat deep, the better to convey moisture from the Corn, and that it be left cloddy as much as may be: and yet to say the truth, such as will convert this sort of ground to Tillage, must provide a greater quantity of rich ground or Greet (as we term it) and Dung, than of Marle it self, to amend this Land withall. But if there be any ground that is light and whining, or weeping, because of Springs that are therein, and therewith doth cast up Rushes, let that be marled upon the green Land with four or five hundred Loads upon the Acre, about the latter end of Summer; for so will the Marle sink into it, and cast up a sweet grass for eight or ten years together, and until that the Marle be sunk so low, that another sward or crust of Earth be grown over it. and then it is fit time to plow it, but yet very fleet and narrow, for so will it bear good Oats; but if it be so so wet that you cannot adventure to sow your Wheat upon it, because the Rushes be not killed with this first plowing, then may you sow it again with Oats, drawing good water-furrows to drain it, because it will be the better for plowing, and thereby the Marle also will the sooner lose his force; thus doing, let it lie to pasture again.

There be some other Grounds of the Marle Cope, which carry a four Grass, and the Dyers-weed, (commonly called Greening Dyers-weed) and having a great tore thereof, the which also may be amended by three or four hundred load of Marle upon the Acre of the green Land: for the Marle will both rot the tore or vesture thereof, and also enrich the Mould very much; so as it will answer good pasture twelve years after: and when you shall perceive that the Marle is well sunk, then may it be Ploughed fleet and narrow, sowed with Oats and fallowed; so may it both beat good Wheat if it find a good season, and be the richer a long time after, partly by the benefit of the Marle, partly by the rotting of the tore and sward, and partly by the dung and water of the Cattel that pasture upon it: for the sweeter the Pasture is, the more Beasts it feedeth; and the more Beasts it beareth, the more it self is amended by it.

Touching the fallowing of this ground, great heed is required: for as it swelleth more than the Hazel-ground, if it be taken hard

and dry, so it is more grasse then that, or the Sandy Soil if you fallow it wet: The season therefore followeth commonly in *April*, or in the beginning of *May*, for to fallow it, and to stir it about *Midsummer*, or so soon after as the Rain shall have prepared it meet for your unshod Oxen to labour upon it. Many men fearing to hit the right season for this ground in the Spring of the year, do make it ready by a Winter-fallow before *Christmas*, and by stirring it before *Minsummer*, if they may, which manner is not to be disliked.

The ordering
of the Sandy
moulds.

Lastly, cometh the two sorts of Sandy-ground, and gravelly mould, the one being to be ordered much after the hazel mould; saving he would have somewhat more *Marle*, and also would be favoured more in the often tillage, than it: for the hazel mould will bear or endure more than the Sand. But this last sort of sandy ground, being a very stiring sand (as we use to call it) for much of it will bear Heath, being of itself very barren and very steet or shallow mould, and over-hot and dry, and by reason of that extremity, is unfertile except it be marled very plentifully. And therefore when you break up this ground, Plough it as deep as you may, not fearing to cast down the best Mould thereof, because the *Marle* will pierce thorow, and sink down into it. An Acre of this ground requireth five or six hundred loads of your *Marle* at the least. So alwaies under furrow about *Michaelmas* with two bushels and a half upon the Acre, which it will better carry than the Hazel ground: for although the straw be small, yet will it be harder, and stand better than that of the other. The Worm whereof I spake, will be busie with that that groweth on this sort of ground, until that the heat thereof be somewhat asswaged by the *Marle*. If your ground be hilly, make your Water furrows in such sort as I have said before, for the saving both of your *Marle* and Mould, harrow it very little, leave it as cloddy as you may. After that you have taken a Crop from it, fallow that Wheat Gratten or Stubble in *May*; after that stir it also, and then about *Michaelmas* sow it with Wheat again: for it is not yet rich enough to bear you good Pease. This done, let it rest four or five years, and if it send up any plenty of Broom, cut

or pull them when they be of some mean bigness, but plough not the ground until it have taken such rest; and after it, you may well break it up of new, and sow it with Oats: which Oats-gratten or Stubble, you must Summer-fallow, when it is at the Harvest: and then if you desire to have it in good heart, you must Marle it with three hundred or four hundred loads upon the Acre again. After this Crop thus taken, rest it five or six years, and then take one Crop more of Oats from it, and after a Summer-fallow, sow it with Wheat, and suffer it to lie a Wheat Gratten or Stubble, till it shall have rested as before is appointed for the hazel ground; and so it will be the better thirty or forty years after the marling. We have in this Weald a sandy and gravelly ground that is wet and weeping, the which is scarcely worth the marling, except the nearness of the *Marle*, (and thereby the small cost and charge thereof,) may intice a man to bestow the cost upon it with *Marle*, and then the best way is to Marle upon the green Land, or upon a fallow, with 500 Loads or more upon the Acre, or rather to take the profit thereof by Pasture then by Tillage: for it will hardly bear good Corn, which is soon killed with wet vapour that is continually sent up from the wet Springs that lie under it. This sort of wet ground is to be fallowed, when it is both hard and dry, because it swelleth not as doth the hazel Mould, and may therefore be taken in *June*, if former fair Weather bring it not to a dry season; and it is to be stirred also after a shewre, in the like plight as the hazel mould before. Your Marlable grounds being ordered in this wise, severally set down for each kind of them, will continually stand fruitful either for Corn or Pasture, and albeit the high prices which Corn hath of late years carried may allure some men to sow Corn incessantly, and thereby to spend their *Marle*, and to choak their Arable in the end; yet I doubt not but the wiser sort can see that it is much better to maintain their Grounds hearty and in good plight for ever, then to raise a short gain, that will bring a long and perpetual loss upon them: The rather also, because that Butter, Cheese, and the flesh of Beef and Mutton be advanced in price equally, if not beyond Wheat, Rye, Barley and the other grains. Howbeit, a good Husband will make his profit of them

both: for if he have one hundred, or one hundred and twenty Acres of this Wealdish Arable, he will so *Marle* and manure them, that dividing his Land into five or six equal parts, he may continually plough twenty, or five and twenty Acres for Corn, and yet lay to pasture the rest by turns, so that by the help of his *Marle* his Land shall be continually rich and profitable, both in the one and other of them.

And thus I have spoken of the Weald, describing the nature and property thereof: so may every man of discretion and judgment, which shall meet with earth of the same quality and condition (in what part of this Kingdom soever) make application of these Rules before rehearsed, and no doubt but the profit will make both the labour and cost profitable and pleasant.

THE

The several Wayes, according to the

Opinion of Writers, and the certain Wayes, according to the Experience of Husbandmen, for the destruction of Moals, or Moles which digg and root up the Earth, how to reduce and bring the ground to the first goodnes, having been spoiled by them.

IT is needles either to describe the nature and quality of this Vermin, or the injury and hurt which they do the Husbandmen, Gardiner, and Planter, since no County is exempt from their annoyance: but touching the Remedies, they are of greater secrecie, and therefore I thought good in this place to insert them.

The ancient Writers are of divers Opinions touching the manner of destroying this Creature, and therefore have left unto us sundry medicines how to work the same; amongst the which one writoth as an approved Experiment, That if you take Walnuthshells, and fill them with Brimstone, Chaff, and Petrosin, and then setting them on fire, put them in holes or trenches, through which the Moal passeth, the very smell or stinch thereof will poyson them; so that if you digg you shall find them dead in their holes.

Another affirmeth, That if you take Brimstone, and rank stinking Litter of Horses, and burn it in the holes or haunts of the Moals, it also will impoyson them, so as you shall find they will come out of their Caves, and lie dead upon the green grass.

A third affirmeth, That if you take green Leeks Garlick or Onions, and chopping them grossly, thrust it in the holes, the very stink or savour thereof will so astonish and amaze the Moal, that they will presently forsake the Earth, and falling into a Trance, you may take them up with your hands. Now there is not any of these Medicines which can be disallowed, for there is no doubt but that they will work the effects spoken of, if the Moal can be brought to take a full scent thereof: but it is a Vermine curious of scent, and passing quick of hearing, and being in a spacious ground, will prevent these baits: and therefore they are rather to be applied for Gardens or little Grounds, where there is but a Moal or two, then in large fields, where there be many hundreds.

To

To conclude, for this matter of Medicines, or for the helping of Gardens, Hop-yards, or any small spot of Ground, there is not any thing held more available, that to sow in that place the herb called *Palma Christi*; for it is found by certain experience, that wheresoever that herb groweth naturally of it self, or otherwise is either purposely sown or planted there in no wise will any Mole abide.

Thus much I thought good to shew you for the use of Medicine, and for clearing of small grounds: Now for the annoyances which happen to great, large and spacious fields, through the multitude of Moles, there is only three absolute waies for the curing of the same.

The first is, in the months of *March* and *April*, to view where they cast, and go about to make an extraordinary great Hill, in which they build their nests, which is known by the newness of the Mould; then look for the new trench which leadeth to the same; for as she goeth she returneth: then with your Mole-spade open the trench in divers places, and then very still and silently, observing to take the Wind, to prevent both hearing and smelling, watch the Mole as she goeth or returneth, which is Morning, Noon, and Evening; and as soon as you see her cast, strike her with your Mole-spear made of many sharp pikes, and so cast her up, and kill her. Thus have I seen by one man an hundred destroyed in one day.

The next infallible way for the destruction of Moles is, If you can by any possible means bring in water to overflow and wash your ground, and as soon as the earth is wet over, the Moles will come forth of themselves, and you may gather them up with your hands at pleasure.

The last (in deed as much approved as any) is to take a live Mole in the month of *March*, which is their bucking or ingendring time, and put it into a deep bras Basson, or other deep smooth Vessel, out of which the Mole cannot creep; and then at Evening bury it in the earth up to the brim, and so leave it; and the imprisoned Mole will presently begin to shrike, complain, or call, so that all the Moles in the ground will come to it, and tumbling into the Vessel, they are prisoners also; and the more prisoners, the greater will be the noise; and the more noise, the

more

more *Moles* will come to the rescue : so that I have seen 50 or 60 taken in one night, and in one vessel or brass Kettle.

Now having thus learned how to destroy the *Moles*, it is meet you also know how to prevent the coming in of foreign *Moles*; because though you keep your ground never so clean, yet if your next Neighbour be an ill husband, his field may soon impoyson yours again : therefore to prevent the coming in of any foreign Mole, make but little Furrows or Trenches about your ground, and scatter in them small round Balls made of Hemp-seed, or Hemp-seed and *Palmi Christi* beaten together, and you shall not need to fear the coming in of any Neighbouring *Moles*, how many soever there be about you.

Lastly, for the reducing or bringing the ground to the first perfection again (for howsoever some Husbandmen say, Moe *Mole-hills*, moe ground; yet 'tis certain, that moe *Mole-hills*, less good ground) for never was yet sweet grass seen on a *Mole-hill*; therefore to bring it to perfection, which I mean to be meadow-ground; or ground to be mown, which *Mole-hills* cannot be, you shall first with a sharp paring-shovel, pare off the swarth about three fingers-deep, for fear of hurting the roots of the grass; and then the swarth taken off, digg away the rest of the Mould, and scatter it as small as you can round about the Hill, then take the green swarth, and cutting it artificially, lay it close and fast, and level, where you took away the mould, as if there had never been Hill there : and thus do to all your Hills; though they be never so innumerable; and after all your ground is levelled, as soon as the first shower fallen, run all your ground over with a pair of back Harrows, or an Harrow made of a Thorn bush, and it will break the mould as small as ashes, which will so comfort and refresh the root of the grass, that it will grow in infinite abundance; and sowiness which was caused by reason of the Hills, will come again to a perfect sweetness, and the meadow will be more fruitful than before by many degrees. And thus much for the destruction of *Moles*, and the reducing of the Earth to his first goodness.

E I N I S,

Markham's Farewel to

HUSBANDRY:

OR,

The Enriching of all sorts of Barren and
Sterile Grounds in our Nation, to be as
Fruitful in all manner of Grain, Pulse, and
Grass, as the best Grounds whatsoever.

Together with the Annoyances and Preservation of all
Grain and Seed, from one year to many years.

As also a Husbandly computation of Men and Cattels
daily Labours; their Expences, Charges, and utmost profits.

Now newly the Tenth time revis'd, corrected and amen-
de d, together with many new Additions, and cheap Experiments.

For the bettering of Arable Pasture, and
Woody Grounds: Of making good all Grounds
again, spoiled with over-flowing of Salt water by
Sea breaches; as also the enriching of the Hop-
Garden. And many other things never
published before.

By *G. Markham.*

LONDON,

Printed for *George Sawbridge*, at the Sign of the Bible
on *Ludgate-Hill*, 1676.

THE BANNER

The Fortnightly of all sorts of Banners

together with the Announcements and Proceedings of all
the various Societies, and the state of the various

As the Banner is a weekly paper, it contains all the news
of the day, and is a most valuable and interesting

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For the bettering of Able Persons, and

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grains, seeds, and other things, and also the printing of the
Bible, and many other things.

By G. M. M. M.

LONDON

Printed for George Smith, at the Sign of the Bible
on Ludgate Hill, 1856.



TO the RIGHT WORSHIPFUL
AND

HIS most Worthy FRIEND,
BONHAM NORTON, Esq;

Worthy Sir,

Knowledge, which is the divine
mother of certain Goodness, ne-
ver came unwelcome to a know-
ing Judgment; no more, I hope,
shall this my labour to your worthy Self, since
doubtless you shall find in it many things
necessary, and nothing which hath not in it
some particular touch of profit: It is a work
your former encouragements to my other la-
bours did create in me, and the wants you
worthily found, I hope shall bring you sup-
plies

plies both wholesome and becomming. The
experience, I assure your goodness, was the
expençe of a bitter and tedious Winter ;
but the contentment (in gaining my wish)
made it more pleasant then all the three other
Seasons. What ever it be, it comes to you
full of love, full of service. And since I
know Virtue measureth all things by its
own goodness ; it is enough to me, that I
know you are that Virtue. In you is pow-
er to judge, in you is Authority to exercise
Mercy ; let them both flye from your good-
ness with that mildness, that in them my
hopes may be crowned, and my self rest
ever at your service.

GERVASE MARKHAM

The Preface to the Reader.

Shewing the use, profit, and truth of the Work.

THe use and application of this Work, (gentle Reader) is to reduce the Hard, Barren, and Sterile Grounds, such as were never fruitfull, or such as have been fruitfull, and are made barren by ill Husbandry, to be generally as fruitfull as any ground whatsoever. from whence shall ensue these general profits.

First, Plenty of Corn and Pulse; because all grounds being made able and apt for Tillage, the Kingdome may afford to some for one bushell that is now, hereafter five hundred, so mighty great are the unfruitfull waists of Heaths, Downes, Moors, and such likes which at this day lye unprofitable; and to this abundance of Corn will arise an equall abundance of Grass and Pasture: for as the best ground of the worst is to be converted to Pasture, and the worst to Tillage; so that worst being tilled and drest, when it hath done bearing of Corn, (which will be in six or seven years) shall for as many years more bear as good Pasture either for breeding or feeding as can be required, and then being newly drest again, shall newly flourish in its first profit.

Secondly, whereas in fruitfull places, the third or fourth part of all arable ground is lost in the fallow or tilth ground, now in these barren grounds, you shall keep no fallow field at all, but all shall bear either Corn or Grass; that fallow part serving to pay for the charge bestowed on it, and the rest.

Lastly, whereas in fertile grounds you cannot have either Wheat, Barley, or Rye, under two, three, four, five, and
six.

To the Reader.

six severall plowings, as fallowing in January and February, Stirring in April and May, Soiling in July and August, Winter-riding in October and November, and Sowing, with other Arduors; now in these hard grounds restored, you shall not plow above twice at the most, to the saving of the Husbandmans pains, his Cattels travell, and a larger limitation of time for other necessary businesses.

For the truth of the Work, he that will ride into the barren parts of Devonshire or Cornwall, into the Mountainous parts of Wales, into the hard parts of Middlesex, or Darbyshire, or into the cold parts of Northumberland, Cumberland, Westmerland, Lancashire, or Cheshire; shall find, where industry is used, a full satisfaction for all that is here written.

Farewell.

Tbine, G. M.



MARKHAM

HIS Farewel to Husbandry.

CHAP. I.

The Nature of Grounds in general; But particularly of the barren and steril earth.

TO come to the full effect of my purpose, without any preambulation, or satisfaction to the curious, (for to the honestly vertuous are all mine endeavours directed) you shall understand that it is meet, that every Husbandman be skilful in the true knowledge of the nature of grounds; as, which is fruitful, which not: of which in my first Books I have written sufficiently; nor do I in this Book intend to write any tittle that is in them contained; for as I love not *Tautology*, so I deadly hate to wrong my friend.

Grounds, then, as I have formerly written in my first books, being simple or compounded; as simple Clays, Sands, or Gravels together, may be all good, and all fit to bring forth increase; or all evil and barren, and unfit for profit: for every Earth, whether it be simple or compound, whether of itself or of double mixture, doth participate wholly with the Climate wherein it lyeth; and as that is more hot, or more cold, more moist or more dry, so is the earth ever more or less fruitful. Yet for the better understanding of the plain

Coun-

Country-man, you shall know that both the fruitful and unfruitful Grounds have their several faces and characters, whereby they be as well known, as by the clime or situation of the continent: for that ground, which, though it bear not any extraordinary abundance of grasse, yet will load it self with strong and lussy weeds, as Hemlocks, Docks, Mallows, Nettles, Ketlock, and such like, is undoubtedly a most rich and fruitful ground for any grain whatsoever. And also, that ground which beareth Reeds, Rushes, Clover, Daisie, and such like, is ever fruitful in Grasse and Herbage, so that small cost, and less labour in such grounds, will ever make good the profit of the Husbandman: But with these rich grounds, at this time I have nothing to do.

To come down then to the barren and unwholesome Grounds, you shall understand that they are to be known three severall wayes: first, by the Clime and Continent wherein they lye; next, by their constitution and condition; and lastly, by outward faces and characters. By the Clime and Continent, as when the ground lyes far remote from the Sun, **W**hen it is mountainous and high; stony and rocky; or so neere unto the Skirts and borders of the Sea, that the continuall Foggs, Storms, Mists, and ill Vapours arising from thence, poyson and starve the earth: all which are most apparent signs of barrenness. By the Constitution and Condition, as when the ground is either too extremely cold and moist; or else too violently hot and dry; either of which produceth much hardness to bring forth, and sheweth the earth, so lying to be good for little or no profit. By the outward faces and Characters, as when you see (instead of Grasse, which would be green, flowry and thick growing) a pale thin mossie substance cover the earth; as most commonly is upon all high Plains, Heaths, Downs, and such like; or when you see the ground covered with Heath, Ling, Broom, Braken, Gorse, or such like, they be most apparent signs of infinite great barrenness, as may be seen in many Moors, Forests, and other wild and woody places. And of these infertile places, you shall understand, that it is the clay ground, which for the most part bringeth forth the Moss; the Broom; the Gorse, and such like; the sand, which bringeth forth Brakes, Ling, Heath, and

and the mixt earth, which utters Whinnes, bryars, and a world of such like unnatural and bastiardly issues.

Thus having a true knowledge of the Nature and Condition of your ground, you shall then proceed to the ordering, earing, and dressing of the same, whereby it may not only be purged and cleansed from those faults which hindred the increase thereof, but also so much bettered and refined, that the best ground may not boast of more ample increase, nor your more fruitfull placed Neighbours exceed you in any thing, more then in a little ease.

CHAP. II.

Of the Ordering, Tilling, and Dressing of all sorts of plain barren Clayes, whether they be simple or compound.

THou whom it hath pleased God to place upon a barren and hard soil, whose bread must evermore be ground with sweat and labour, that maist nobly and victoriously boast the conquest of the earth, having conquered Nature by altering Nature, and yet made nature better than shee was before : thou I say that taketh this honest delight in goodness, hearken unto these following Precepts.

As soon as thou hast well pondered and considered the nature of thy ground, & dost find that it is altogether barren & unfruitful, the clyme and condition not suffering it to bring forth any thing of worth or profit, and that thou hast well weighed what manner of earth it is, as that namely, it is either a simple Clay, or a Clay so mixt with othet earths, that yet notwithstanding the Clay is still most predominant; thou shalt then select or chuse out of this earth so much as to thy self shall seem convenient, it being answerable to the strength of thy Team, and the ability of thy purse and labour to compass; and this earth so chosen out, thou shalt about the beginning of *May*, in a fair season break up with a strong Plough, such as is generally used in all strong Clay grounds, the Share being rather long then broad, and the Coulter rather somewhat bending then streight and eaven according as the nature of the ground shall require,

The first enriching of barren Grounds.

B

which

which every simple Plough-man will soon find out in turning up two or three furrows; for according to the cutting of the earth, so must the Husbandman fashion the temper of his Plough.

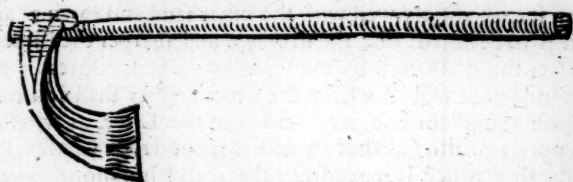
The manner
of Ploughing.

Now for the manner of plowing this bad and barren earth, if the ground lye free from water (which commonly all evil barren earths do) you shall then throw down your Furrows flat, and betwixt every Furrow you shall leave a baulke of earth half as broad as the Furrow, and so go over, and plow your whole earth up, without making any difference or distinction of lands: but if you fear any annoyance of Water, then you shall lay your Furrows more high, near, and close together, dividing the grounds into several lands, and proportioning every land to lye the highest in the midst, so that the water may have a descent or passage on either side.

Hacking of
Ground.

Now so soon as you have thus plowed up your land, and turned all the swarth inward unto the earth, you shall then take Hacks of Iron, well steeled, and reasonable sharp, such a competent number, as your purse or power can compass, or the greatness of your ground requireth: for you shall understand, that one good hacker, being a lusty labourer, will at good ease hack or cut more then half an acre of ground in a day; and with these hacks you shall hew and cut to pieces all the earth formerly plowed up furrow by furrow; and not the furrows onely, but also each several baulke that was left between, and any other green swarth whatsoever the plough had escaped, and it shall be cut into as small pieces as conveniently as you can; for thereby is your mould made much more mellow and plentiful, and your Seed at such time as it is to be cast into the earth, a great deal the better and safer covered, and much more sooner made to sprout and bring forth increase. Now for the shape and fashion of these Hacks, you shall behold it in this figure.

When



When you have thus hacked all your ground, and broke in pieces all hard crusts and roughness of the swarth, you shall then immediately, with all the convenient speed you can (because time is very precious in these labours) if you be near unto any part of the Sea-coast, or to any other Creek or River, where the salt-water hath a continual recourse, thence fetch (either on Horse-back, or in Cart, or other Tumbril, such as the nature of the Country, or your own ease can afford) great store of the salt sand, and with it cover your ground which hath been formerly plowed and hackt, allowing unto every acre of ground, three-score or fourscore full bushels of sand, which is a very good and competent proportion; and this sand thus laid, shall be very well spread and mixed among the other hackt and broken earth. And herein is to be noted, that not any other sand but the salt is good or available for this purpose, because it is the brine and saltiness of the same which breedeth this fertility and fruitfulness in the earth, choaking the growth of all weeds, and bad things which would sprout from the earth, and giving strength, vigour, and comfort to all kind of grain, or pulse, or any fruit of better nature.

Sanding of
Ground.

When you have thus sanded your earth, you shall then if you have any Limestones about your grounds (as barren earths are seldome without) or if you have any quarries of stone (which are seldome unaccompanied with Lime-stone) gather such Lime-stone together, and make a Kiln in the most convenient place you have, as well for the carriage of the Lime, as for the gathering together of the stone, and having burnt your Lime, the manner whereof is so generally well known through the whole Kingdome, that in this place it needeth little or no repetition, you shall then on every Acre so formerly plowed, hackt, and sanded, bestow at least forty or else fifty bushels of Lime, spreading and

Liming of
Ground.

mixing it exceedingly well with the other sand and earth; and herein is to be noted, that the stronger and sharper the Lime is, the better the earth will be made thereby, and the greater encrease and profit will issue from the same: neither shall you need to respect the colour and complexion of the Lime, as whether it be purely white (as that which is made from Chalke) or gray (as that which is made from the small Lime-stone) or else blackish brown (as that which is made from the great stone and main Quarry) since it is the strength and goodness of the Lime, not the beauty and colour, which brings forth the profits.

Manuring of
Ground.

Now that this Lime is of excellent use, and wonderful profit, do but behold almost all the Countries of the Kingdome where there is any barrenness, and you shall find and see how frequently Lime is used, insomuch, that of mine own knowledge in some Countries, where (in times past) there was one Bushel made or used, there is now many loads, and all risen from the profitable experience which men have found in the same.

Now, when you have thus Limed your ground, you shall then take of the best manure you have, as Oxe, Cow, or Horfe-dung, Straw rotted either by the littering of beasts, or by casting upon high-ways, the mud of Lakes, Ponds or Ditches; the soyle of young Cattel made in the Winter time by feeding at stand, Heake, or any such like kind of Ordure; and this manure or compost you shall carry forth either on Horfe-back, or in Carts of Tumbrels (according as the Country will afford) and you shall lay it and spread it upon your ground so formerly plowed, Hackt, Sanded, and Limed in very plentiful manner, so far forth as your provision will extend; for it is to be understood, that barren and hard earths can never be overladed with good manure or compost, since it is onely the want of warmth and fatness, which manure breedeth and causeth all manner of fruitfulness.

Times for all
labours.

After you have thus manured all your ground, it is to be supposed that the season of the year will be shot on, for the labour of landing will take little less than two months, your ground being of an indifferent great quantity, except you have assistance and help of many of your friends, which is a courtesie that

that every Husbandman may embrace, but not trust unto; for I would not wish any man that hath not Tenants to command, to presume on other friends, lest they fail him, and so his work lye half done, and half undone; which is a great Character of negligence and improvidence: but let every one proportion their labours according to their own strengths, and the number of their ordinary families. The Liming of your ground will take at least half so much time as the sanding, and the Manuring rather more than less than the Liming; so that by any reasonable computation of time, beginning to plow your ground at the beginning of May, ere it be Hackt, Sanded, Limed, and Manured, *Michaëlmus* will be come, which is the end of *September*; for I allow the month of *May* to plowing and hacking; *June* and *July* for Sanding; *August* for Liming; & *September* for Manuring. So then to proceed on with our labour, at *Michaëlmus*, or from that time to the end of *October*, you shall begin to plow over that ground again which formerly you had Plowed, Hackt, Sanded, Limed and Manured; and at this latter plowing you shall plow the ground somewhat deeper then you did before; and taking a good fitch (as they call it in Husbandry) you shall be sure to raise up the quick earth, which had not been stirred up with the Plough before, making your furrows greater and deeper than formerly they were, and laying them closer and rounder together then they were before; and in this order or latter earing, you shall be careful to Plough your Ground as clean as you can without balks, or other escapes in husbandry, and as you thus plow your ground, you shall have certain Hackers, with their Hacks to follow the Plough, and to cut the earth and furrows into very small peeces, as was formerly shewed in the hacking and cutting of the first arder; then so soon as your ground is thus ploughed and hackt, you shall take a paire or two of very strong and good Iron harrows, and with them you shall go over your ground, tearing that which was formerly ploughed and hackt into more small peeces than before, and raising up the mould in much greater abundance than was formerly seen: which work once finished, you shall then take your Seed which would be the finest, cleanest, and best Wheat you can provide, and after the manner of good Husbandry,

Second Plowing.

Second hacking.

First Harrowing.

Of sowing the seed. bandry, you shall sow it on the ground very plentifully, not starving the ground for want of Seed (which were a tyrannous penury) nor yet choaking it with too much (which is as lavish a foolery) but giving it the full due, leave it to the Earth and Gods blessing.

The second Harrowing.

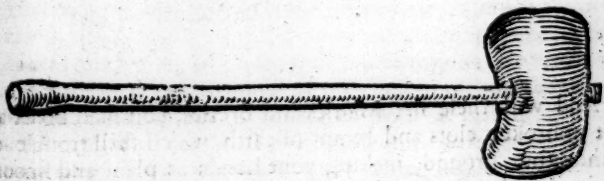
Faults in the Earth.

Now so soon as you have thus sown your seed, forthwith you shall take all the harrows again, harrowing the seed into the earth, and covering it close and well with all care and diligence: and in this latter harrowing, you shall have great respect to break every clot as much as you can, and so stirr up and make as much mould as you can, and the finer such mould is made, the better it is, so it cover deep and close; for you shall understand, that all these kinds of barren Clayes are naturally tough, cold, and binding, whereby they stifle and choak any thing that growes within them; for the natural toughness of the earth will not give any thing leave to sprout, or if it do sprout, the binding nature thereof so setters and locks it within the mould, that it cannot issue out; or if it do (with extreme struggling) rise through the pores of the same, yet doth the cold presently starve the root, and make the stемme utterly unable to bring forth fruit, or any profit at all, so that if the toughness be not converted to a gentle looseness, and easie dividing of it self, the coldness unto warmth, and the hard binding unto a soft liberty, there can be small hope of commodity, which this manner of dressing the earth bringeth to pass; for the mixture of the sand takes away the toughness, the Lime brings heat, and the manure comfort and liberty: As for the hacking and cutting the earth, that is, to make all the rest symbolize and mix together; for as if any by a Dispensatory make a Medicine, and cast his ingredients confusedly one upon another, without care of mixture, melting, or dissolution, shall find but a corrupt, disorderly, and ill compounded receipt; so he that dresseth and manureth his ground, and doth not by hacking, plowing, or some other Husbandry course mix the earth, and the compost perfectly well together, shall seldome find profit from his seed, or find any man of wit desirous to become his imitator. Now I must confess, that some easie grounds of light and temperate nature, will mix very well and sufficiently by the help of the Plough only;

only ; but this barren hard earth of which I now write, must onely be broken by this violent and extreme labour, or else there will neither be mould, earth, or any converſure for the Seed, but only foul, great, and diſorderly clots and lumps, through which the graine can never paſs, and that which lyeth uncovered will be made a prey to fowl, and other vermine, which will hourly deſtroy it.

After you have ſown and harrowed the ground, you ſhall then ſee if there remain any clots or hard lumps of earth unbroken, which the teeth of the harrow are not able to tear in pieces (as it is very likely you ſhall perceive many) for theſe hard barren earths which are plowed up in their green ſwarths, are nothing neer ſo eaſily broken and brought to mould, as are the mellow ſoft earths which have been formerly plowed many times before, becauſe the hard and intricate roots of the Graſs, Moſs, and other quick ſubſtances growing upon the ſame doth bind and hold the mould ſo cloſe and faſt together, beſides the natural ſtrength and hardneſs of the earth, that without much induſtry and painfull labour, it is impoſſible to bring it to that fineneſs of mould which Art and good Huſbandry requireth ; therefore as ſoon as you behold thoſe clots and lumps to lye undiſſevered, and unbroken, you ſhall forthwith take good ſtrong clotting beetles, or mauls made of hard, and very ſound wood, according to the proportion of this figure.

Of clotting
the Earth.

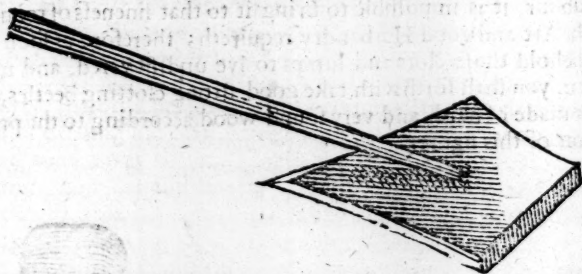


And with theſe mauls or clotting beetles, you ſhall break all the hard clots and lumps of earth in pieces, even to ſo ſmall duſt as poſſibly you can, becauſe you are to preſuppoſe that theſe clots thus hard, tough, and unwilling to be with any me and diggeſted into

into mould, are either not at all, or else very insufficiently mixed with the Sand, Lime, and other manures : and therefore you must rather break them that thereby they may mixe, and give easie passage to the Grain, and not like heavy poysses and dead lumps lye and press down the Seed so that it cannot sprout.

Another manner of Clotting.

But if it so fall out, partly by the hardnesse of the ill earth, partly through the season and dryness of the year, that these clot and lumps of earth will either not be broken at all, or at least so insufficiently that the mould will not be any thing near so fine as you would have it : you shall then, having done your best endeavour, let your ground rest till there have fallen a good round shower or two of rain : which may wet the clots through and through; and then the next fair blast you shall take your clotting beetles, but not those which you took before in the dry season, but some much lighter, broader and flatter, being made of thick Ash-boards more than a foot square, and above two inches in thickness, according to this figure.



And with these flat Maules and Beetles, you shall break all the unbroken clots and lumps of earth which shall trouble or annoy your ground, making your Lands as plain and smooth as is possible, so that the grain may have easie passage forth; which labour as soon as you have finished, you shall then refer the increase and prosperity thereof unto the mercies of God, who no doubt will give his blessing according to thy labour and thankfulness.

As touching the trimming and weeding of this Corn, after *Of Weeding* it is sprung a foot above the earth, or thereabout, you shall understand, that these hard barren grounds are very seldome troubled with weeds; for weeds, especially great, strong, and offensive weeds, are the issues of rich and fertile soils; yet, if through the trimming and making of this earth (which is not commonly seen) you do perceive any store of thistles or other grosser weeds to spring up, you shall then in the month of *May*, with hooks, nippers, and such like tools, cut them away, or pull them up by the rootes, which indeed is the better manner of weeding.

Now here is to be understood, that your ground being thus dressed and trimmed as is before shewed, you may very well for *Several Seeds* the two first years sow Wheat or Rye upon it, but Wheat is the greater profit and more certain seed; the third year bestowing but your fold of Sheep upon it, that is, manuring it with your Sheep, (for it is to be intended, that in these barren earths sheep are the greatest stock of which the Husbandman can boast) you may very well sow it with Barley, and have a fruitfull & plentiful crop thereon; the next three years, you may sow it with Oats; and the seventh year you may sow it with small white Garden Pease or Beans, according as you shall find the strength and goodness of the ground, (for Beans desire somewhat a richer soyl than the Pease;) then for three or four years following the seven, you may let it lye at rest for grass, and doubtless it will yield you either as good pasture, or as good Meadow as you can reasonably require. And then after the expence of this time, it shall be good that you dress and order your ground again in such sort as was formerly declared; and thus you may every year dress one or other piece of ground, till you have gone all over all your ground, or at least as much as you shall think expedient; and without faile, he that is Master of the most fruitfull and richest soyl, shall not boast of any greater increase then you shall, only your charge may be a little more, and so shall be also your commodity, which shall make an amends for your charge: as for your toyles, yours shall be much the less, by a just computation; for though you have many labours, yet they are but Summer labours, and neither hurt your own body, nor your

Cattel; whereas the Master of the rich soyl is in continuall work both Winter and Summer, labouring twice so much to confound the superfluous growth of Weeds, as you do to beget the increase of Corn, and whereas he must ever keep a third or fourth part of his Corn ground without fruit, you shall not keep any which shall not yield you a sufficient Commodity.

Objection.

Now me-thinks I hear in this place to be objected unto me, that whereas I do prescribe the sanding of these barren earths with the salt Sea-sand and no other, (as it is true, for all other fresh sand is unavailable) what if the ground do lye so far within the Land, that there is no salt sand within many score miles of it; how then shall I make good my barren earth? sure to fetch sand so far will never equal the cost; or it may be this experience hath no further limits then to such hard and barren earths as lye alongst the Sea coast only.

Answer.

To this I answer, that albeit this salt Sea-sand be of infinite good and necessary use; inriching grounds wonderfully much, yet is not this experience of bettering of barren soiles so strictly bound thereunto, but that without any use of the same, you may make your earth as fruitful in Corn or Grass, as hath been already formerly declared.

Ordering
Earth where
Sands want
reth.

Therefore if your ground lye much within the Land, and far from the Sea, so that this Commodity of sand is not by any possible means to be gotten; then you shall (having first lookt into the Nature of your ground, and finding it to be by all characters and faces a cold, barren, stiff, dry Clay, yielding nothing but a short mossie Grass, without any other burthen at all, as is seen upon most Plains, and Downs of this Kingdom) first plow it, and hack it, as was before shewed in the former part of this Chapter, then instead of sanding it, you shall lime it as aforesaid, or rather a little more plentifully, then you shall manure it, after (as at seed time) you shall plow it and hack it again, then harrow it as before said; then to every Acre of ground you shall take two bushels of very dry bay-salt, and in such manner as you sow your wheat, you shall sow this salt upon the ground; then immediately after the sowing of the salt, you shall sow your Wheat, which Wheat would be thus prepared before you sow it; the day before you are to sow your grain, you shall

Sowing of
salt.

shall take bay salt and water, and mixing them together make a brine so strong that it will bear an Egge, then put the Wheat you are to sow into that brine, and let it steep therein till the next day, then drain it as clean as may be from the brine, and so sow, harrow it, clod it, and weed it, as was before declared, and no doubt but you shall find a marvellous great increase thereby, for this I can assure you, both from a most certain knowledge, and a most worthy Relation, that a Gentleman buying some store of Seed-wheat; and infort to bring it home by Sea, by some casual means, some of the Sacks at the unlading, fell into the Sea, and were much drencht in the salt-water, whereat the Gentleman being grieved (as doubting some hurt to come to the seed) yet infort of necessity to make use thereof, caused all the Wheat which was so wet to be sown by its self in a particular place, and upon the worst ground which he had, (as much despairing in the increase thereof) and it is most infallibly true, that of that wet seed, he received at least five fold more profit then of any other; and from thence it came, that this experiment of Brine and the sowing of salt hath taken place; from which the painful Husbandman hath found such infinite increase to arise, that the use thereof will never be laid down in this Kingdome. Neither is the thing it self without good and strong probability of much increase and strength for the bettering of all manner of arable grounds; for there is nothing which killeth weeds, quicks, and other offences of the ground so much as saltness; for what makes your Pidgeons dung & your Pullens dung to be better for arable grounds, then any other dung, or manure whatsoever, but by reason of the saltness thereof; by which saltness also, you may judge the strength and heat thereof, in so much that the proper taste of fire, or any hot thing is ever salt; also we say in Philosophy, that blood which carryeth the vital heat and warmth of the body is in taste salt, and so a nourisher, maintainer, and increaser of all the strength and vigour of the inward faculties; whereas Flegm, Choler, and Melancholly, which are the hurts, and confounders of the vital spirits, the first is in taste sweet, the second bitter, and the last of an earthly and dry taste, full of much loathsomeness.

The Excellency of Salt.

Now again, you shall understand, that as you thus wet or Offsleep
sleep seed in brine.

steep your Wheat seed, so you may also steep any other Seed ; as barley, oats, beans, pease, lupins, Fetches, and such like ; of which your beans, pease, and lupins, you may steep more than any of the rest, and your Oats the least.

As touching Rye, it shall be good not to steep it at all, for it is a great enemy to all manner of wet and moisture, in so much, that the curious Husbandman will forbear to sow it in any showre of rain, bearing in his mind this ancient adage, or saying, that *Rye will drown in the Hopper* ; as on the contrary part, *Wheat would be sown so moist that it might stick to the Hopper* : Yet notwithstanding, when you do sow Rye in any of these In-lands, and cold barren Countries, where sand is not to be gotten, you shall not by any means omit the sowing of your salt before ; for it is nothing neer so moist as it is warm and comfortable.

CHAP. III.

Of the ordering, Telling, and dressing of all rough Barren Claves, whether simple or compound, being laden and over-run with Gorse, Broom, and such like.

NExt unto these plain barren earths, which by reason of their heights, are subject in the Winter time to all manner of cold, froasts, stormes, tempests, blasts, and winds, which are the perfect hinderers of all encreases and growth ; and in the Summer time to all hot scorching, scaldings, and fiery reflections of the Sunne, which on the contrary part, burneth and withereth away that little seeming increase which appeareth above the earth ; I will place that barren clay whether it be mixt or unmixt, which lying not so high, and being subject unto those hurts and offences, seemeth to be a little more fruitfull, yet either by the extreame cold moisture thereof, or the stony hardness and other malignant qualities, is no less barren than that of which I have formerly written, which indeed is that barren and vile soyle, which will neither bear corn nor grass, but is onely over-run and quite covered

over

over with great, thick, and tall bushes of Gorse or Furrer, which is most sharp, woody, and gross weed, so full of pricks, that neither Horse, Beast, Sheep, nor Goats dare thrust their noses to the ground to gather up that little poor grass, which groweth thereon. And albeit these Gorse or Furs are one way a little commodity to the needfull Husbandman, in being a reasonable good fuel, either for baking, brewing, or divers other sudden and necessary uses; yet in as much as the profit being compared with the great quantity of earth which they cover and destroy, and which with good Husbandry might be brought to great fruitfulness, it is indeed no profit at all; it shall not be amiss for every good Husbandman that is pester'd and over-laden with such ground, to seek by way of good Husbandry how to reduce and bring it to that perfection and excellency which may be best for his own particular commodity, and general good of the Kingdome wherein he liveth.

Then there is another kind of soile which is nothing at all differing from this, but is every way as barren and sterile, (which is as noysome a weed as the former) and though it have not such sharp prickles as the other, whereby to hinder the grazing of Cattel, yet doth it grow so close and thick together, and is naturally so poisonous and offensive to grass, that you shall seldome see any grow where this Broom prospereth; besides, the bitterness thereof is so unpleasant and distastfull to all kind of Cattel, that not any will ever crop or bite upon the same, only it is of some necessary use for the poor Husbandman, in respect that it serveth him both for fuell, for thatching and the covering of his houses, (being for that purpose, of all, the longest lasting) and also for the making of Beesoms for cleansing of the house and barns, or else for sale and commodity in the Market; all which profits (as before I said) being compared with the loss of the ground, and the goodness that might be reaped from the same, are indeed truly no profits but hindrances.

Therefore I would wish every man that is Master of such grounds, whether they be over-run with Gorse, Furrer, Broom, or any such kind of gross, woody, or substantial weed, first to cut up

Destroying of Weeds. up the Weed (of what sort soever it be, whether Gorse, Furs, or Broom) as close and neer to the ground as you can possibly, and then making them up in sheafs or bigge faggots, carry them home, and stak them up very dry, so as no rain may enter or piece into them; for the smallest wet will rot and consume them to dirt and drossines; which done, you shall make Labourers with Hooks, picks and such like tools, to stub up all the roots which you see in the ground, even to the very bottom of the same; and these roots you shall be very careful to have stubbed up exceeding clean, by no means leaving (so neer as you can) any part or parcell of the roots behind you; then these roots thus stubbed up, you shall diligently gather together into little heaps, as bigge as Moal-hills, and place them upon the ground a pretty distance one from another, and so let them lye till the Sun and Wind have dryed them: for it is intended, that this labour must begin about the latter end of April, and beginning of May.

Burning of Bait.

Then so soon as you find these roots are thorowly dryed, you shall pile them handsomely together, laying them a little hollow one from another, and then with a hack cut up some of the same earth, and therewithall cover all the roots quite over, only leaving a vent hole at the top, and on one side, and so let the hills rest two or three dayes, till the earth be a little parcht, and dried, then take fire and some other light dry fuel which is aptest to blaze, and with the same kindle every hill, not leaving them till you see them perfectly on fire; which done, let them burn both day and night, till the substance being wholly consumed, the fire go out of it own self, and this in some Countries is called the *Burning of Bait*.

Breaking of the burnt Earth.

Now as soon as the fire hath been extinguished for two or three dayes, you shall then come, and with shovels (& becsles to break the hard burnt earth in pieces) you shall spread all the ashes clean over the ground; which done, you shall with a very long plough tear up the earth into great and deep furrows, and divide it into Lands, as you shall think meet and convenient, laying them higher, and flatter, as you shall have occasion; and as the ground lyeth more or less within the danger of water, whether it be the over-flowing of some neer Neighbouring Brooks,

Brooks, or Rivers, or else other standing water occasioned by Rain and extraordinary Showres, which must be carefully lookt unto; because all over-flows and inundations of water is a mighty destroyer and consumer of grain: but these barren grounds of which I now write, are very seldom oppressed with water; for most commonly they lye so high, that the continual dryness thereof is a strong occasion of the much unfruitfulness. After you have thus burnt your bait, and plowed up your ground, you shall then with your hacks hack it into small pieces, in such manner as was declared in the former Chapter; then you shall (if the Sea be any thing near you) sand it with silt sand (as before said) then lime it, and after, manure it either with Ox-dung, Horse-dung, rotten Straw, mud of Ponds and Ditches, the spirling of House-floores, or sweeping of Channells and Streets, or such like; or for want of all these, in case you dwell neerer unto the Sea-coast (where manure for the most part is in greatest scarcity, and the hardest to come by) you shall gather from the bottom of the rocks (where the scyde of the Sea continually beareth) a certain black weed, which they call Hemp-weed, having great broad leaves, and growing in great abundance, in thick tufts, and hanging together like pease-straw; and with these weeds you shall cover your lands all over of a pretty good thickness, and then forthwith you shall plow it again somewhat deeper, and with somewhat greater furrows then before, raising up the new quick earth to intermingle; and mix with those manures and helps which thou hast formerly prepared and laid upon the ground; then you shall again hack it, and harrow it; then you shall take Pigeons dung, or Pullens dung (that is, any kind of land fowl whatsoever, but by no means any water fowl) or Pigeons dung and Pullens dung mixt together, and allowing to every acre two or three bushels thereof, which is the true quantity of seed proportioned for the time, and this dung being broken and made into small pieces, you shall put into your Syclop or Hopper, and in the same manner as you sow your corn, you shall sow this dung upon the ground, and then immediately after it you shall sow your Wheat, either steeped in brine, or else salt Sea-water, or unsteeped as you shall think good; but in case you can neither get fules

Causes of unfruitfulness.

An Excellent Manure.

Of Plowing.

Of divers Manures.

find

Mixture of
Manures.

land nor Sea Rock-weeds, then you shall by no means omit the steeping of your Seed; neither shall you fail before you sow your Seed, to mix with your pigeons and pullets dung, a full equal part of Bay-salt well dried and broke, and so sown with the dung upon the land, and then the seed after it; which done, you shall harrow it again, clot it, sleight it, and smooth it, in such sort as was formerly declared in the former Chapter, for these labours have no alterations, but must in all points be done as was before set down.

Of weeding.

Now touching the weeding of this earth, after the Corn beginneth to grow about the ground, there is no fear to be had either of Thistles, Tares, Cockles, Darnel, Docks, and such like strong weeds, which indeed are the issues of good grounds ill ordered and handled; but the weeds which you shall most fear in this place, is young Gorse, or Furrs, or else young Broom, which are very apt to grow from the least part or parcell of roots that shall be left behind; Nay, the very nature of those barren earths is such, that of its own accord it will bring forth those weeds: the cold sharpness of the air mixing with the sterility & roughness of the earth, being the cause that it will give life to no other better plants; therefore so soon as you shall behold any of them to appear above the earth, though they be not half a finger high, you shall presently with all diligence pull them up by the roots, and cast them away, or lay them in heaps that they may be afterwards burnt, and the ashes sprinkled upon the ground: And herein is to be observed, that the younger and the sooner that you do pull up these weeds, the better it is, and the callier they will come from the earth, and the sooner be destroyed: for all those mixtures wherewith already you have been taught to mix your earth, are in themselves such naturall enemies to all these kind of barren weeds, that should you omit the manual labour of destroying them (which no good Husband willingly will do) yet in time the earth of it self, and the often plowing of the same would leave no such offence of weeds, or other growths which might hinder the corn.

Time for
Weeding.

Now touching the best time when to pull away these weeds, though generally it must be done as soon as they do appear above the ground; yet it shall not be amiss for you to defer the work

work till after a showre of rain, and then immediately after the ground is wet) and so by that means more apt and willing to open and forsake the root fastned within it) you shall with all diligence pull them out of the ground, and destroy them : neither shall you pull them out of the ground with your hands only ; for the Gorse have exceeding sharp pricks, so that with your naked hands you are not able to touch them, and to arm your hands against them, with strong thick gloves, would be too boisterous and combersome, so that sometimes you might either mis the weeds, and pull up the corn ; or else pull up the corn and weeds both together ; therefore to prevent all these casualties or hinderances, you shall take a pair of long small wooden Nippers, made after the form of this figure.



And with these you shall pull the weeds out of the ground, and cast them into the furrows by the sides of the Land, till your dayes work be finished, and then with a rake you shall rake them together, and so lay them in heaps to dry and wither, in more convenient places; that when time shall serve, you may burn them, and use them, as was before declared.

Lastly, you shall have great respect, that if this ground be very much troubled with loose stones, as flint, pibble, and such like, that then you very carefully get them gathered from the ground, both before and after you have plowed it, and to lay them on heaps in other vacant places, where they may serve for pavings, and such like purposes when time requireth : but if the ground be over-run with great, or else small Limestones, as for the most part these barren grounds are ; then shall you with all care gather them up, and lay them in great heaps in some corner of your field, where you may make a convenient Lime kiln, and so there burn these stones thus gathered, which will be

Gathering of
stones.

both an infinite profit, and an infinite ease to the rest of your labours.

CHAP. IV.

Of the ordering, Tilling, and Dressing of all rough barren Claves, whether simple or compound, that are over-run with Whinnes, or such like.

NExt unto this barren Clay, which is over-run with Furse, Broom, and such like, I will place that barren and unfer- tile earth, being also a Clay, whether simple or compound, which is over-run onely with Whinns, and indeed bearing little or no other burthen, or if it do bear any other burthen as some little short mossie grasse, yet is that grasse so covered over with these sharp Whinns, that not any beast dare put his nose to the ground, or bite upon the same; and indeed this kind of earth is not any whit at all less barren than those of which I have already written, but rather more, in that the malignant qualities thereof are not so soon corrected, nor yet the vertues so soon restored.

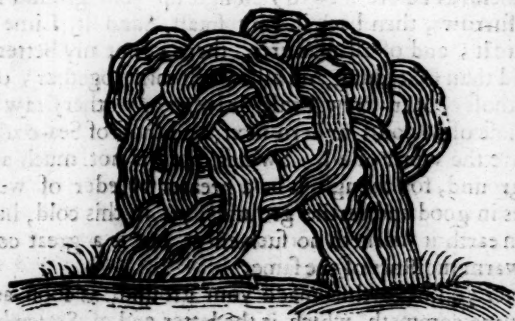
What whinnes
are.

Whinnes are a certain kind of rough dry weeds, which grow bushie and thick together, very short and close unto the ground, being of a dark brown colour, and of crooked growth, thick and confused, and full of knots, and those knots armed with hard, long sharp pricks like thorns or bryars, they have little brown leaves which shadow the pricks, and do wind their branches so one into another, that they can hardly be separated, yet is not their growth at any time little more than a handfull above the earth, only they spread exceedingly, and will runn and cover over a whole field, choaking up all sorts of good plants whatsoever, and turning the best grasse that is, to moss and filthiness: wherefore if at any time you be Master of any such naughty and barren ground, and would have it reduced unto goodness and fertility, you shall first take a fine thinn paring shovel made of the best Iron, and well steeld, and hardoned round about the edges, according to the form of this figure following.

And:



And with this paring-shovel, you shall first pare up all the upper swarth of the ground, above two inches, or an inch and a half thick at the least, and every paring would be some three foot in length at the least, and so broad as the shovel will conveniently give it leave, and this swarth thus pared up, you shall first turn the Whinny or Grass side downward, and the earth side upward and so let it lye two or three dayes in the Sun to dry (for this work is intended to begin in the month of May) and when that side is well dried, you shall turn the other side, and dry it also, then when all the swarth is dried, you shall gather six or seven peeces together, and turning the Whinny or Grass side inward and the earth side outward, you shall make round hollow little hills thereof, much according to the fashion of this Figure following.



And the inward hollownes like unto the hollownes of an Oven, but much less in compass; which done, you shall fill the hollownes with dry chips, or small sticks, or Furfe and Straw

mixed together, which you shall put in at the vent-hole which shall be lett on one side of the hill, and kindling it with fire, you shall burn all that swarth in such sort as you burnt the roots of your Furfe and Broom before; for this is also called a burning of bait, as well as the former; for it is a most principal nourisher of the earth, and a very sudden destroyer of all malignant weeds whatsoever.

Breaking of
Baits,

After the burning of your hills, as soon as the fire is utterly quenched and gone out, and no heat at all left in the hills; you shall then with clotting beetles beat them all down to dust, and then with shovels you shall spread the ashes quite over all the ground, as was before declared in the former Chapter: and herein is to be noted, that you must place these hills as thick and close together as by any means possibly you can, making your hills so much the less and lower, that they may stand thicker and nearer together, and so cover more ground, and thereby the heat and strength of the fire to disperse it self over all that peece of ground; for the fire burning upon the earth, doth as much good for the enriching of the earth, and destroying of the weeds, as the ashes doth which are spread upon the same.

Howing.

Now after your bait is in this manner burned and spread, you shall then (as before shewed) plough up your ground in good large furrows, then hack it very small, Sand it, Lime it, and manure it; and of all manures, there is not any better for this ground than Oxe-dung, and ashes well mixt together; of which ashes, those of bean-straw, Pease-straw, or any other straw are best; and those of Wood; or Fern next, and those of Sea-coal, or Pit-coal are the worst of all. Swines dung is not much amiss for this ground, for though it be a greater breeder of weeds and thistles in good and fertile grounds, yet in this cold, hard, and barren earth it worketh no such effect, but is a great comforter and warm moistner of the same.

After you have thus made your ground, as soon as Wheat seed-time commeth, which is the latter end of *September*, and beginning of *October*, you shall then with great care plow over your ground again, and take great respect that you turn up your furrows much deeper than before, and that for two special causes,

causes; the first, that the new earth may the better be mixt with the old earth, and those helps that are added thereunto; and secondly, that you may be sure to tear up the roots of all the Whinns from the very bottom of the earth, not suffering any part of them to remain behind, and for this purpose it shall not be amiss to have an idle boy or two to follow your plow, and to gather away all the roots that shall be torn up, or any way else left bare above ground, which roots shall be laid on heaps in convenient places, and then after burnt, and the ashes thereof spread upon the ground: which will be a very great comfort unto the seed, being a speedy help unto the sprouting thereof, and a very warm comforter of the root after the stēmm is spindled above ground, for in these cold barren earths nothing doth so much spoyl and slay corn, as the dead coldness which lyeth at the root thereof; for in many of these unferrill places, you shall see Corn at the first sowing (whilst there is a little strength in the ground) sprout in great abundance, promising much hope of the profit: but when it should spindle and come to much better perfection, that poor strength being spent and consumed, and the cold and dryness of the soyl, having as it were overcome all matter of comfort, then presently you shall see the blade of the Corn turn yellow, the stēmm or stalk to wither, and either put forth no ear at all, or else a very poor little empty one, being laden with nothing but a most dry chaffie husk without substance. But to come again to our purpose, after you have thus plowed up your ground the second time, you shall then hack it again, and harrow it, as was declared in the former Chapters; then you shall take your seed-wheat which hath been steeped either in brine or Sea-water, and to every bushel of that seed you shall add a bushel of bay-salt, and mix them very well together in your Hopper or Sydlop, and so sowe them together upon the ground, observing to double your cast so oft, that you may not fail to cast that true quantity of seed into the earth, which otherwise you would have done, if so be there had been no mixture at all; for to do otherwise were to deceive the ground, and a handfull of seed so saved would be the loss of a peck in the time of Harvest; therefore have great respect that your ground have his due; for it is no

more cost, though it be a little labour.
 Harrowing. When your seed is sown, you shall harrow it again the second time, clot, smooth it, and sleight it, as was before declared in the former Chapters.

As touching the weeding of this ground, it is the least labour of all other, for the earth being so corrected as is before shewed, it will naturally of it self put forth no weeds, especially if you remember to plough it deep, and be sure to tear up and gather away all the quick roots, otherwise if that labour be any thing neglected, then will it put forth both Whins and great store of other rough weeds, which as soon as you shall perceive to appear, you shall presently with your wooden nippers pull them up by the roots, as was at large declared in the foregoing Chapter.

Now for the general profit of this ground thus made and prepared, it is the same that the two former are, that is to say, it will bear you good and sufficient Wheat, in plentiful abundance for the space of two or three years; then barley a year after; then Oats three years together after the barley; and pease or beans a year after the oats; then Lastly, very good Medow or Pasture for the space of three or four years after, and then you shall begin and dress it again, as was formerly declared.

CHAP. V.

Of the ordering, Tilling, and Dressing of all barren Claves, whether simple or compound, which are over-run with Ling or Heath.

Here followeth now successively another sort of barren earth, which indeed is much more sterile and barren than any of the other formerly written upon; because they, out of their own nature, do bear a certain kind of grass or food which will relieve ordinary hard store-Cattel, whether it be Sheep, Goats, or young Beasts: But this earth, of which I am now to entreat, beareth no grass at all, but only a vile filthy black brown weed, which we call Ling, or Heath, the tender tops whereof Cattel and wild Deer will sometimes crop, yet it is to them but little relief, and only maintaineth life and no more.

Now

Now albeit some may object unto me, that this kind of soyl is ever a sandy soyl, and no clay, as may be seen in most Chafes, Forrests, and Down; yet I answer, that albeit it hold so in general, yet there are divers clays, especially in mountainous Countreies, that are pestered with these kind of weeds, as may be seen in the North, and North-west part of *Devenshire*, in some parts of *Cornwall*, and in many parts both of North and South *Wales*; and these clay grounds which are thus offended with these weeds of Ling, or Heath, are much more barren and unfruitful than the Sands, because of their much more coldness; yet those clays which are mixed with either black Sand, dun Sand, or yellow Sand, and over-run thus with Heath or Ling, are the most barren of all. To make any further description of this Heath or Ling, being a thing so notoriously known over all this Kingdome, I hold it meerly needless, only to say it is a rough brown weed, shooting out abundance of stalkes from one root, with little dark leaves, and flowers on the top, of a pale reddish colour, much inclining unto Peach colour at the first: but being full blown, they are then a little more whitish.

You therefore that have any such ground, and desire to bring it to fruitfulness, and bearing of good Corn and Grasse in a reasonable abundance, you shall first with sythes or sharp hooks (but old sythes are the better) cut down all the Heath, or Ling, which groweth upon the earth you intend to convert to goodnes, so neer the ground as possibly you can; then when it is cut down (which would ever be at the beginning of the Month of May) you shall let it lye upon the ground, daily tossing and turning it till it become very dry, then spreading it all over the ground, and mixing or covering it with dry straw of any kind whatsoever, you shall presently set it on fire in so many several corners of the field, that all the several fires in the end may meet in one poynt, and not leave any part of the mowen Heath or Ling unburnt, or any part of the ground unscorched. After this is done, and the ground cooled, you shall with your flat clotring beetles beat the ashes hard into the ground, then you shall take a strong plow, with a broad winged share, and an eaven coulter, and you shall plow up all this ground thus burnt.

Another burning of Baite.

in very large and deep furrowes, by no means picking out any of the quick roots which shal remain in the furrows so turned up, but letting them rest in the earth still; then with your hacks, and the help of your Iron paring shovell, you shall cut up the furrows, formerly turned up, into short pieces, of three foot, or three foot and a half long, and some less as occasion shall serve: then with these pieces, you shall build little hollow hills, such as in the former Chapter you made of the upper swarth of the ground only; and then filling the hollownes with dry heath, and dry straw mixt together, you shall set every hill on fire, and so burn the very substance of the earth into ashes, which will soon be done by reason of the infinite number of roots and small strings, which lye mixt in the earth, and the drynes thereof occasioned by the former burning: And this is another kind of burning of Baite, much differing from all the former, and yet to as great end and profit as any whatsoever; and these hills must, as the former, be placed one as near another as is possible, so as they may spread and cover over the greatest part of the ground, and leaving no more than a good reasonable path to pass between hill and hill.

Now as soon as you have burned all your Baite, and that your hills are cold, you shall then as was before shewed in the former Chapter, with beetles and shovels break down the hills, and spread the earth and ashes over all the ground which done, you shall sand it (if the situation of the ground be answerable thereunto) and lime it in such sort as was shewed in the second Chapter; then when it is limed, and the lime equally spread, not more in one place than in another, you shall then manure it with the best manure you can provide, of which there is none better or more proper for the ground than mans ordure, and the rubbish, sweepings, parings, and spitlings of houses mixt together: for want of this (because it may not be in so great plenty as other manures) you may take either old Oxe dung, or Horse dung, or for want of them the old rotten and muddy saddles or bottomes of Corn stacks of Reeds, especially Pease-stacks, or Bean-stacks, provided that it be thoroughly rotten; for the less rotten it is, the worse it is. Also the scourings of common Sewers, and especially those through

through which much of mans urine doth pass, is a most wonderful and beneficial manure for these grounds; so are also the scowring of sinks and channels, which come from Kitchens and wast-houses, where great store of brine and salt broath is shed, and other greasie, fat, and putrified substances, as also abundance of sope-suds, and buck-ashes, and other sope and lee-washings, than which, there is no better manure that can be used for these kind of grounds.

After your ground is thus perfectly made and manured, and that Wheat-seed time doth draw on, which (as before was shewed) is ever at the latter end of *September*, you shall then plow up your ground again in that manner as was shewed for the former earths, to wit, much deeper than before: for you are to understand, that this ground being drest, as is before declared, there will nothing remain of the furrows which were first plowed up but the ashes, which being covered with sand, lime, and manure, the earth will lie plain and level, so that of necessity you must raise up new furrows of new earth, which being done, you shall then with your hacks, cut all the new earth into very small pieces, mixing them well with the other mould made of sand, lime, manure and ashes; then as was before said, you shall harrow it to make the mixture so much the better, and the mould so much the finer: and then if it have been sanded, you may sow your seed wheat simply of it self, without any doubt of the plentiful increase thereof; but if it have not been sanded, then as in the foregoing Chapter, you shall not only steep your Seed in brine (as before shewed) but also you shall mix your Seed with Bay-salt, and so sowe into the ground: or if at the time of sowing (after it is plowed, hacked, and harrowed) you bestow either Pigeons-dung, or Pullens-dung, or Sheeps-dung upon the Land, it will be much better, and the Corn will give a much greater increase. Now as soon as you Land is sown, you shall forthwith harrow it again, and cover the Seed very close; then you shall clot it, smooth it, and sleight it (as was before shewed.)

As touching the weeding and cleansing of this earth after the Weeding. Corn is sprung up, you shall understand that there is great care to be had thereunto, for this ground is much subject unto weeds,

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and

and those of the worst kind : for although for the most part it will be free from all manner of soft and tender weeds, as thistles, cockle, darnel, ketlocks, docks, rape, and such like herbal stuff, yet it is much subject to twitch-bryars, which grow at both ends, Ling, Wilde-time, and such-like, any of which as soon as you shall see to appear, or peep above the earth, you shall presently with your Nippers pull them up by the roots, and not suffer them in any wise to look a handful above the ground ; for if you do, their hardness is so great, and their roots so large and fast fixt into the mould, that you can by no means pull them away without great loss and hurt to the grain, pulling up with them all such roots of Corn, as shall be fixt near about them : for any other weak and superfluous things which shall grow from the Land, you may with ordinary weeding hooks cut them away ; as for long grass, whether it be soft or sedge, or any other such-like stuff, you shall not stir it, but let it grow : for it keepeth warm the roots of your Corn, and giveth nourishment and increase thereunto. Now for the profit of this Soil thus ordered and husbanded, it is equal with any of the former, and will bear Wheat very plentifully for the space of the three first years ; good Barley the fourth year with the help of the sheep-fold (as was before said) and good Oats the fifth, sixth, and seventh years ; and very good small Pease, the eighth year (for beans this Soyl will very hardly bear at all) and the ninth, tenth, and eleventh year it will bear very good meadow (though not altogether very fine pure grass, yet very good feeding and wholsom grass) or so good pasture as a man can reasonably require for any holding Cattle whatsoever ; nay, it will also indifferently well feed, and fat Cattle, though peradventure it requireth a little longer time than other finer ground will.

CHAP. VI.

Of the ordering, Tilling and Dressing of all plain simple barren Sands, bearing nothing but a short mossie grass.

HAVING thus (in as large manner as I hope shall be needful for any judicious or indifferent Reader) written of the Natures, Orderings, Plowings, and Dressings of all manner of barren

ren and unfruitful Clays, whether they be simple of themselves, or else compounded with other earths, as Sands, Chalks, Gravels, and such like; shewing by those natural burthens which continually of their own accord they do produce (which indeed is the easiest and safest way of knowledge) how to amend and better them, and bring them to that perfection of fruitfulness that the best earth shall but in a very small degree exceed them, nay, nay hardly any thing at all, except in the saving of a little charge and some labour, without which nothing is to be obtained by the Husbandman; neither is this charge or labour thus bestowed on these barren Grounds to be grutcht at by any honest mind; since the worst crop of ten or eleven will make good his charge and toil with a reasonable Interest; so that I make account, nine or ten years profits come into his Barns without purchase; for it is to be intended, that all these earths formerly spoken of, are not to be drest, or to put the Husbandman to any charge more than the first year of ten or eleven, for the second year he shall as soon as he hath gathered his Wheat off, which will be in *August*, and finisht other parts of his Harvest, presently put his Plow into the same Wheat-ground again, and plow it up, hack it, and harrow it, sowe it, harrow it again, clod it, and weed it, as in the former year, and so consequently of all the rest of the years following; whereby you perceive that all labours and charges are saved more than once plowing and sowing.

This then considered, it necessarily now followeth that I speak of the bettering, and bringing into perfection of all manner of barren sand Grounds, being simply of themselves, without any mixture of other earths, except one and the same kind; as sand with sand, though peradventure the colours of the Sands may alter, as red with white, yellow with black, &c. which in as much as the whole substance is sand without any contrary mixture, there it may well be called simple and not compound; and of these Sands, I purpose to treat, as formerly I did of the Clays; that is to say, by their outward faces and Characters, which are those burthens and increases, which of their own proper nature, without any help or compulsion of any other, they produce and bring forth into the world.

Plowing.

And first of that naughty cold and barren Sand, which lying upon high, stony, and mountainous Rocky places, or else upon lower cold bleak Plains, subject to the North, and North-East winds and tempests, or bordering upon the Seas, doth not bring forth any thing but a short mossie grass, which the Sun maketh bitter, and the cold dews fullsome and unflavory in taste. If any man then be Master of such unprofitable and unfruitful earth, and desire to have it brought to goodness, and perfection, you shall first, at the beginning of the Spring, as about middle *April*, or earlier, with a strong Plow answerable to the Soil, yet somewhat less, both in Timbers and Irons, then that wherewith you plow your Clay ground, plow so much of that earth up as you may conveniently compass, to sow and dress exactly, and perfectly, for to undertake more, were to make all unprofitable, and to cast away much labour and charge, without any profit. This ground you shall plough of an indifferent depth, though not so deep as the Clays, you shall lay the furrows, though flat, yet close one to another, without leaving any bulk between, but ploughing all very clean, yet not so very clean and close together, that you may lay the green swarth, to the new ploughed or quick earth; but rather turn one swarth against another, so as the furrows may lie, and no more but touch the edges one of another: This when you have done, you shall then with your hacks, cut and break all the earth so turned up into very small pieces, and not only the earth so turned up into very small pieces, but also other green swarth which was left unplowed; provided that before this labour of hacking, you let the ground lie certain days in the furrows, that one swarth heating and scalding the other, they may both equally rot and grow mellow together: which once perceived by the blackness thereof, you may then at your pleasure hack it, and cut it, as is before declared.

Objection.

Now some may in this place object unto me, That this labour of hacking should be needless, in as much as all sand grounds whatsoever are out of their own nature so light, loose, and willing to dissolve, that this toyl might very well and to good purpose be saved.

Answer.

To this I answer, That true it is, most Sands in their own natures

tures are loose and light, and willing to dissever into fine mould without any extremity, especially rich and fruitful Sands, whose predominant quality of warmth, giveth nourishment and increase : But these barren and cold Sands, in which is a certain stigmaticke toughnes, and most unwholsom driness, are of a clean contrary nature, and through the stony hardnes thereof, they are as unapt to break and dissever, as any Clay whatsoever : besides, the swarth being of a tough mollic substance, (which ever carrieth a hard strong root answerable with the cold in which it is engendred) doth so constantly bind, fetter, and hold the mould together, that it is impossible for any harrow to break it in pieces, or to gather from it so much mould as may serve to cover the Corn, and give it root when it is sown into the same : And therefore this work of hacking is necessary.

When therefore you have thus hackt your Land, and distributed the mould into many small pieces, you shall then with all expedition Marle it; which forasmuch as it is no general nor common practice in every part of this Kingdom, I will first tell you what Marle is, and then how to find it, dig it, and use it for your best behoof.

Marle, you shall then understand, is (according to the definition of Master Bernard Palissy) a natural, and yet an excellent Soil, being an enemy to all the weeds that spring up of themselves, and giving a generative vertue to all seeds that are sown upon the ground : or (for the plain Husbandmans understanding) it is a certain rich, stiff, and tough clay, of a glewy substance, and not fat or Oyly, as some suppose. This Marle is in quality cold and dry, and not hot (as some would have it) and it was earth before it came to be Marle, and being made Marle, yet it is but a Clay ground; all Chalk whatsoever was Marle before it was Chalk, and all manner of stones which are subject unto Calcination or burning, as Lime-stone, Flint, or the like, were first Marl before they were stones, & only hardned by accident, and so not possible to be dissolved but by the fire; as for Marle it self, when it is a little hardned, it is only dissolved by frosts, and nothing else; and thence is the cause that Marle ever worketh better effect the second year than the first.

This Marle hath been made so precious by some Writers, that

Of Marling.

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Additions.

it hath been accounted a fifth element, but of this curiosity I will not now dispute.

Touching the Complexions or Colours of Marle, there is some difference; for though all conclude there are four several colours in Marle, yet one saith, there is a White, a Gray, or Russet, a Black and Yellow; another saith, there is a Gray, a Blew, a Yellow, and a Red; and a third saith, there is a Red, and White, mixt like unto Porphery. And all these may well be reconciled, and the colours may alter according to the climate and strength of the Sun: So that by these Characters, the Colour, the toughness, and the looseness when it is dried, any man of judgment may easily know Marle, from any other earth whatsoever. This Marle is so rich in it self, and so excellent for continuance, that it will maintain and enrich barren grounds, the worst for ten years, some for a dozen, and some for thirty years; yet there is a great respect to be had in laying of this Marle upon the ground, that is to say, that you lay it neither too thick nor too thin, that you have it neither too much, nor too little; for any of these extremities are hurtful; and therefore hold a mean, and see there be an indifferent mixture between the Marle and the earth, on which it is laid.

For the general finding out of this Marle, there is no better way for readiness, and the saving of charges, than by a great Augur or Wimble of Iron, made to receive many bits, one longer than another, and so wresting one after another into the ground to draw out the earth, till you find you are come to the Marle, which perceived, and an assay taken, you may then dig at your pleasure.

Now for the places most likely where to find this Marle, it is commonly found in the lowest parts of high Countries, near Lakes and small Brooks, and in the high parts of low Countries, upon the knolls of small hills, or within the Cliffs of high Mountainous Banks, which bound great Rivers in: To conclude, you shall seldom find any of these barren Sands, but they are either verged about with Marle Grounds, or if you will bestow the labour to dig below the Sand, you shall not fail either to find Marle, or some Quarry of stone, or both; for in some places Marle lieth very deep, in other some places within

a Spades graft of the upper swarth of the earth : therefore it shall be good for you to make proof of all the most likely parts of your Ground to find out this Marle ; and as soon as you have found it out, you shall with Mattocks and Spades dig it up and carry it to your land , there laying it in big round heaps, and setting them within a yard or two one of another : thus when you have filled over all your Ground (which would be done with as great speed as might be ; for the antient custom of this Kingdom was, when any man went about to Marle his ground, all his Tenants, Neighbours and Friends would come and help him to hasten on the work) you shall then spread all those heaps, and mixing the Clay well with the Sand, you shall lay all smooth and level together ; and herein is to be observed, that if the land you thus Marle shall lie against the side of any great Hill or Mountain, whereby there will be much descent in the ground ; then you shall (by all means) lay double as much Marle, Sand, or other compost on the top of the Hill as on the bottom, because the rain and showrs which shall fall, will ever wash the fatness of the earth down to the lowest parts thereof.

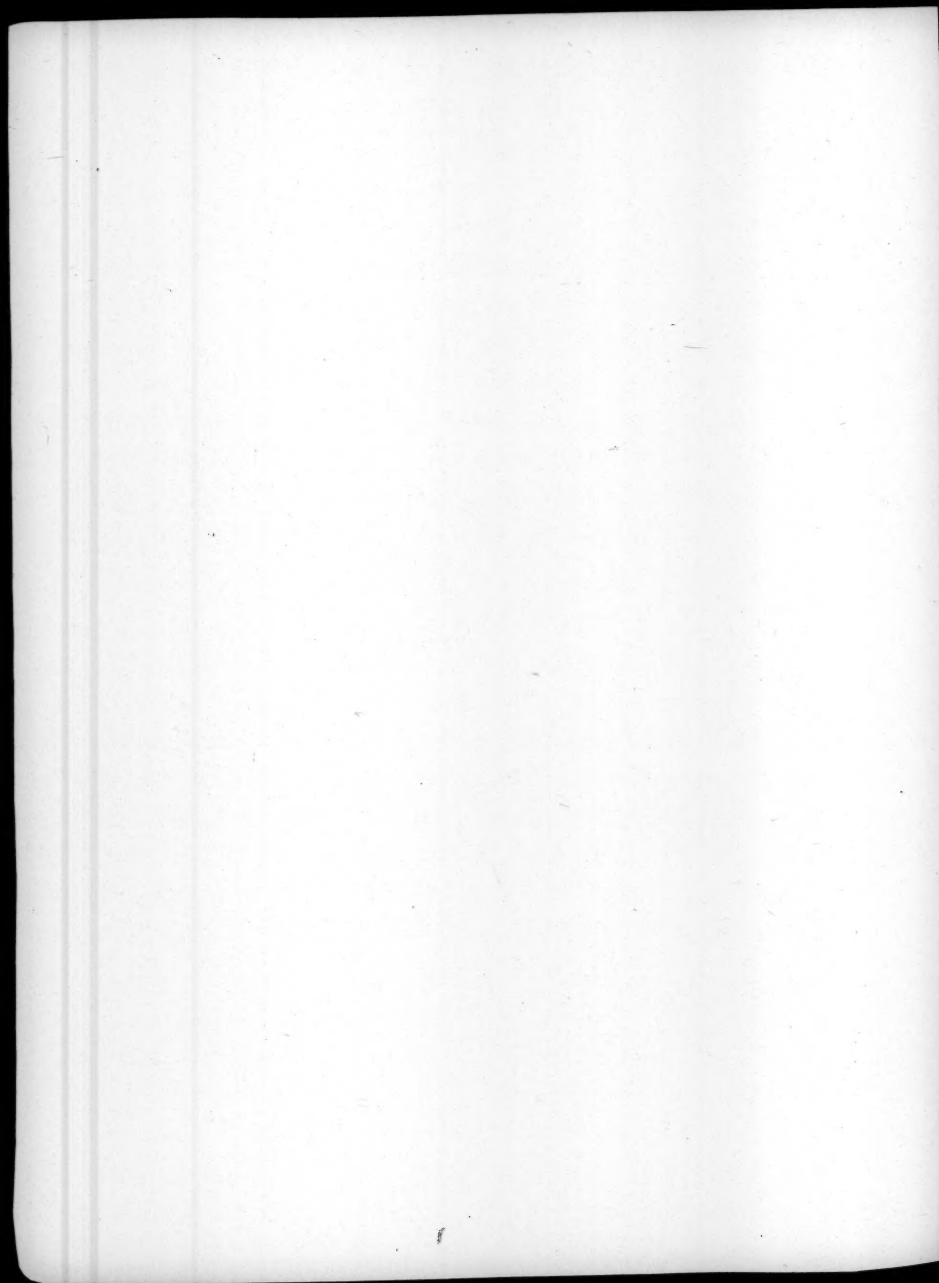
Now in the laying of your Marle, you are to hold this observation, That if you lay it on hard and binding grounds, then you are to lay it in the beginning of Winter : but if on grounds of contrary nature, then it must be laid in the Spring, or Summer. Again, you shall observe, that if you cannot get any perfect and rich Marle, if then you can get of that earth which is called Fullers earth, and where the one is not, commonly ever the other is, then you may use it in the same manner as you should Marle, and it is found to be very near as profitable.

When your ground is thus Marled (if you be near to the Sea-side) you shall then also sand it with salt Sea-sand, in such sort as was formerly declared, only you may forbear to lay altogether so much upon this Sand ground as you did on the Clay ground, because an half part is fully sufficient. If you cannot come by this Salt-sand, then instead thereof, you shall take Chalk, if any be to be had near you, and that you may lay in the more plentiful manner than the Sand ; and albeit it is said, that

that Chalk is a wearier out of the ground, and maketh a rich father, yet a poor son, in this Soil it doth not so hold, for as it fretteth and wasteth away the goodnes that is in the Clay grounds, so it comforteth and much strengtheneth the sand-earths: and this Chalk you shall lay in the same manner as you did your Marl, and in the same manner spread it and level it; which done, you shall then Lime it, as was before shewed in the Clay grounds; yet not so abundantly, because also a half part will be sufficient: after your Liming, you shall then manure it with the best manure you have, whether it be dung of Cattle, Horse, Sheep, Goats, Straw, or other rubbish; and that being done, and Seed-time draweth on, you shall then plow up your ground again, mixing the new quick earth and the former Soyls so well together, that there may be little distinguishment between them: then you shall hack it again, then harrow it; and lastly sow it with good, sound, and perfect Seed: and of Seeds, though Wheat will very well grow upon this earth, yet Rye is the more natural and certain in the increase; yet according to the strength of the ground, you may use your discretion, observing that if you sow Wheat, then to steep it before in brine or salt Sea-water, as was before described; but if you sow Rye, then you shall sow it simply without any helps, except it be Pigeons-dung, or Bay-salt simply of it self, in such manner as hath been before declared, either sowing the salt with the Corn, or before the Corn, as shall seem best in your own discretion.

After your seed is sown, you shall then harrow it again, clot it, smooth it, and sleight it, as before is shewed in the second Chapter; which done, after the Corn is shot above the earth you shall then look to the weeding of it, being somewhat a little too much subject to certain particular Weeds, as are Hare-bottles, wild-Chess-bolls, Gypsie-flowers, and such-like, any of which, when you see them sprung up, you shall immediately cut them away close by the roots; as for tearing their roots out of the ground with your Nippers, it is not much material, for the cutting of them is sufficient, & they will hardly ever again grow to do you any hinderance; many other weeds there may grow amongst these, which are also to be cut away, but these are the principal, and of most note; whereof as soon as you have cleaned

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fed your lands of these and the rest, you shall then refer the further increase of your profit unto Gods Providence.

Lastly, you shall understand that this ground being thus plowed, dressed, and ordered, will without any more dressing, but once plowing and sowing, every year bear you good Wheat or good Rye three years together; then good Barley the fourth year; good Oats, the fifth, sixth, and seventh years; excellent good Lupins the eighth year, and very good Meadow or Pasture three or four years after, and then it shall be necessary to dress it again in such manner as was before described. The profits.

C H A P. VII.

Of the Plowing, Tilling, Ordering, and Enriching of all barren Sand, which are laden and over-run with Braken, Fern, or Heath.

NEXT unto this plain, cold, barren Sand, which beareth no other burthen but a short mossie Grass, I will place that Sand which is laden and over-run with Braken, Fern, or Heath, as being by many degrees more barren than the former, both in respect that it is more loose and less substantial, as also in that it is more dry and harsh, and altogether without nutriment, more than an extreme sterile coldness, as appeareth by the burthen it bringeth forth, which is Braken or Fern, a hard, rough, tough weed, good for nothing but to burn, or else to litter store Beasts withal, for the breeding of Manure; or if you throw it in the High-ways where many Travellers pass, it will also there turn to good reasonable compost.

Of this kind of ground, if you be Master, and would reduce it unto fertility and goodness, you shall first, whether the braken be tall and high (as I have seen some as high as a man on Horse-back) or short, and low (and indeed most commonly these barren earths are, for tall Fern or Braken shews some strength in the ground) you shall with sythes first mow it down in the month of May, then wither it and dry it upon the ground, and after spread it as thin as you can over all the earth you intend to plow; which done, you shall bring your plow and begin to plow the ground after this order: first you shall turn up your furrow, of destroying Braken.

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and lay flat to the ground, green-swarth against green swarth, then look how broad your furrow is so turned up, or the ground so covered; and just so much ground you shall leave unplowed between furrow and furrow, so that your land may lie a furrow and a green-balk, till you have gone over all the ground; then you shall take a paring-shovel of Iron, and pare up the green swarth of all the balks between the furrows at least two inches thick, and into pieces of two or three foot long, and with these pieces of earth, and the dry Fern which is pared up with them, you shall make little round hollow bait-hills, as in the third or fourth Chapters, and these hills shall be set thick and close over all the ground, and so set it on fire and burn it; then when the fire is extinct, and the hills cold, you shall first with your hicks cut in pieces, all the furrow that were formerly turned up, and then break down the burnt hills, and mix the ashes and earth with the other mould very well together; which done, you shall then with all speed marle this earth as sufficiently as possibly may be, not scanting it of Marle, but bestowing it very plentiful upon the same; which done, you shall then plough it over again, and plowing it exceeding well, not leaving any ground whatsoever untorn up with the plow, for you shall understand, that the reason of leaving the former balks, was, that at this second plowing after the Marle was spread upon the ground, the new, quick, and unstirred fresh earth might as well be stirred up to mix with the Marle, as the other dead earth and ashes formerly received, whereby a fresh comfort should be brought to the ground, and an equal mixture without too much driness, and this second Ardor or Plowing would begin about the latter end of *June*.

Sanding and
Liming.

After your ground hath been thus marled, and the second time plowed, you shall then sand it with salt Sea-sand, Lime it, and manure it, as was declared in the foregoing Chapter: and of all Manures for this Soil, there is not any so exceeding good as sheeps-manure, which, although of the Husbandman it be esteemed a Manure but for one year, yet by experience in this ground it hapneth otherwise, and is as durable, and as long lasting a compost as any that can be used; and besides, it is a great destroyer of Thistles, to which this ground is very much subject, be-
cause

cause upon the alteration of the ground the Fern is also naturally apt to alter into Thistle, as we daily see.

When your ground is thus dress'd, and well order'd, and the Seed-time cometh on, you shall then plough it again in such manner as you did the second time, that is to say, very deep, Cle, and after the manner of good Husbandry, without any rest, balks or other disorders; then shall you hack it very well, then harrow it, and then sow it, but by mine advice, in any case, I would not have you to bestow any Wheat upon this Soil, (except it be two or three bushels on the best part thereof, for experience-sake, or provision for your household) for it is a great enemy unto Wheat, and more than the marl: it hath no nourishment in it for the same, because all that cometh from the salt-Sand, Lime, and Manure, is little enough to take away the natural sterility of the earth it self, and give it strength to bear Rye, which it will do very plentifully; and therefore I would wish you for the first three years only to sow the best Rye you can get into this ground; the fourth year, to sow Barley; the fifth, sixth, and seventh, Oats; and of Oats, the black Oat is the best for this ground, maketh the best and kindest Oat-meal, and feedeth Horse or Cattle the soundest; as also it is of the hardest constitution, and endureth either cold or driness much better than the white Oat, the cut Oat, or any Oat whatsoever; the eighth year you shall let it lie for Grass, and then dress it again as before-said; for it is to be understood, that in all the following years (after the first year) you shall bestow no labour upon this ground, more than plowing, sowing, hacking, and harrowing at Seed-time only,

Plowing and
Sowing.

But to proceed to the orderly labour of this ground, after you have sown your Rye, you shall then harrow it again, clot it, smooth it, and sleight it, as was before shew'd in the second Chapter of this Book. And although a man would imagine that the sandy looseness of this Soil, would not need much clotting or sleighting of the Earth, yet by reason of the mixture thereof with the Marle and Manure, it will so hold and cleave together, that it will ask good strong labour to loosen it, and lay it so hollow and smooth, as in sight it should be.

Labour after
Sowing.

Weeding.

Touching the Weeds which are most subject to this Soil, they are Thistles and young Brakes, or Ferns, which will grow up within the Corn, which, before they rise so high as the Corn, and even as it were at the first appearing, you must with your wooden Nippers pull up by the roots, and after take up and lay in some convenient place where they may wither and rot, and so turn to good Manure.

C H A P. VIII.

Of the Plowing, Tilling, Ordering, and Enriching of all barren Sands, which are laden and over-run with Twitch, or Wild Bryar.

HAVING written sufficiently of this hard and barren, waste, wild, sandy ground, which is over-run with Braken, Fern, Heath, and such like. I will now proceed, and unto it joyn another Sand which is much more barren, and that is the Sand that bringeth forth nothing but wild Twitch, Bryars, Thorn-bush, and such like under-growth, of young misliking wood, which never would rise or come to profit, the bitter cold drinck of the earth wherein it groweth, and the sharp storms to which the Clime is continually subject both day and night, blasting it in such manner, that nothing appeareth but starved, withered, and utterly unprofitable burthens, good for nothing but the fire, and that in a very simple sort. Such grounds if you be Master of, and would reduce it to profit and fruitfulness, you shall first with hooks, or axes cut up the upper-growth thereof, that is, the bushes, young Trees, and such like; then you shall also stub up the Roots, not leaving any part of them behind in the earth, carrying away both home to your house to be employed either for fuel, or the mending of the hedges, or such like, as you shall have occasion; this done, you shall take a pair of strong Iron harrows, and with them you shall harrow over all the earth, tearing up all the Twitch, Bryars, and rough grass so by the roots, that not any part but the bare earth may be seen; and when your Harrows are cloyed, you shall unlade them in several places of the ground, laying all such rubbish of weeds, and other stuff which the Harrows shall gather up in a little round.

Destroying of
Twitch and
Bryar.

round hill close up together, that they may sweat, wither and dry; then spreading them abroad, and mixing them well with dry straw, burn them all over the ground, leaving no part of the weeds or the grass unconsumed, then, without beating in of the ashes, you shall presently plow the ground all over very clean as may be, laying the furrows as close as you can to one another, and leaving no earth untoucht or untorn up with the plough; which done, you shall immediately hack it into small pieces, and as you hack it, you shall have idle Boys to go by the hackers, to gather away all the roots which they shall loosen or break from the mould, and laying them on heaps on the worst part of the ground, they shall there burn them, and spread the ashes thereon; after your ground is thus harrowed, plowed and hackt, you shall then muck it, as was formerly shewed in the sixth Chapter; then shall you sand it, lime it, and manure it as before-said.

Now of Manures, which are most proper for this Soil, you shall understand, that either Oxe, or Horse-manure, rotten straw, or the scouring of Yards is very good, provided that with any of these Manures, or all these Manures, you mix the broad-leaved weeds, and other green weeds, which do grow in Ditches, Brooks, Ponds, or Lakes, under Willow-trees, which with an Iron Rake, Drag, or such like Instrument, you may easily draw upon the Banks, and so carry it to your Land, and there mingle it with the other manure, and so let it rot in the ground; this Manure thus mixed is of all other most excellent for this Soil, both by the experience of the Antients who have left it unto memory, as also by daily practise now used in sundry parts of this Kingdom, as well because of the temperate coolness thereof, which in a kindly manner asswages the lime and sand, as also through moisture, which distilling through those warm Soils, doth quicken the cold starved earth, and giveth a wonderful increase to the Seed, that shall be thrown into the same.

After your ground is thus sufficiently drest with these Soils Harrowing, and Manures, you shall then plow it again the second time, and other labours, which would be after *Michaelmas*; after the plowing you shall then hack it again, and be sure to mix the earth and the manures very well together, then you shall break it in gentle manner with

with your Harrows, and then sowe it; which done, you shall harrow it much more painfully, and not leaving any clots or hard earth unbroken that the Harrow can pull in pieces: as touching the Seed, which is fittest for this earth, it is the same that is spoken of in the next foregoing Chapter; as namely, the best Rye, or the best Maslin, which is Rye and Wheat equally mixt together; or if there be two parts Rye, and but one Wheat, the Seed will be so much the more certain and sure holding; and this Seed you may sowe on this ground three years together; then Barley, then Oats, and so forth, as is formerly writ of the grounds foregoing. After your ground is sown and harrowed, you shall then clot it, sleight it, and smooth it as you did the other ground before; and then lastly with your back Harrows (that is, with a pair of Harrows, the teeth turned upward from the ground, and the back of the Harrow next unto the ground) you shall run over all the ground, and gather from the same all the loose Grasse, Twitch, or other Weeds that shall any ways be raised up, and the same so gathered you shall lay at the Lands ends in heaps, either to rot for manure, or else at the time of the year to be burnt for ashes, and sprinkled on the earth the next Seed year.

Lastly, touching the weeding of this Soil, you shall understand the Weeds which are most incident thereunto, are all the same you first went about to destroy; as namely, Twitch, rough wild Grasse, and young woody under-growth, besides, Thistles, Hare-bottles, and Gypsie-flowers; therefore you shall have a great care at the first appearance of the Corn, to see what Weeds arise with it (for these weeds are ever fully as hasty as the Corn) and as soon as you see them appear, both your self and your people with your hand shall pull them up by the roots, and so weed your land as you would weed a Garden, or Woad ground. Now if at this first weeding (which will be at the latter Spring, commonly called *Michaelmas*, or the Winter Spring) you happen to omit and let some weeds pass your hands unpulled up (which very well may chance in so great a work) you shall then the Spring next following (seeing them as high, or peradventure higher than the Corn) with your wooden nippers pull them up by the roots from the ground, and so cast them away.

As touching the cutting them up close by the ground with ordinary weed-hooks, I do in no sort allow it; for these kind of weeds are so apt to grow, and also so swift in growth, that if you cut them never so close in the Spring, yet they will again over-mount the Corn before Harvelt, and by reason of their greatness, toughness, and much hardness, choak and slay much Corn that shall grow about them; and therefore by all means you shall pull these weeds up by the roots whilst they are tender (if possible you can) or otherwise in their strongest growth, sith their sufferance breedeth great loss and destruction.

C H A P. IX.

Of their Plowing, Tilling, Ordering, and Enriching of all barren Sands, which are over-run with Moors, or moorish stinking Long Grass.

UNTo these foregoing barren Sands, of which I have already written, I will lastly joyn this last barren sand, being of all earths, whether Clay or Sand, the most barren. And that is that filthy, black, moorish Sand which beareth nothing but stinking putrified Grass or Moss, or Mo's and Grass mixed together, to which not any Beast or Cattle, how coulsly or hardly bred soever, will at any time lay their mouths; and this kind of ground also is very much subject to marshes and quagmires, of which that which is covered with Moss or Grass, is the worst, and that which is tufted above with Rushes, the best, and soonest reduced unto goodness: In brief, all these kind of grounds generally are extremely moist and cold, the superabundance whereof is the occasion of the infinite sterility and barrenness of the same.

And therefore he that is Master of such unprofitable Earth, and would have it brought to some profit or goodness, shall first consider the scituation of the Ground, as whether it lie high or low; for some of these marsh grounds lie low in the Valleys, some on the sides of Hills, and some on the tops of Mountains: then, whether the much moistness thereof be fed by River, Lake, or Spring, whose veins not having current passage through, or upon the earth, spreads lookingly over all the

the face thereof, and so rotting the mould with too much wet, makes it not only unpassable, but also utterly unprofitable for any good burthen.

Grounds for
Fish-ponds.

Now if you find that this marish Earth lie in the bottom of low Valleys, as it were guarded about with Hill, or higher grounds, so that besides the feeding of certain Springs, Lakes, or Rivers, every shower of rain or falling of water from higher grounds bringeth to these an extraordinary moisture to maintain the rottenness, in this case this ground is past cure for grass or Corn, and would only be converted, and made into a fish-pond, for the breeding and feeding of Fish, being a thing no less profitable to the Husbandman for keeping his house, and furnishing the Markets, than the best Corn-lands he hath; and therefore when he maketh any such Pond, he shall first raise up the head thereof in the narrowest part of the ground, and this head, by driving in of stakes, and piles of tough and hard wood, as Elm, Oak, and such like, and by ramming in of the earth hard between them, and sadding them so fast that the mould can by no means be worn down, or undermined with the water, he shall bring it to as firm earth as is possible, and in the midst of this head he shall place a sluice or flood-gate made of sound and clean Oak timber, and plancks, through which at any time to drain the Pond when occasion shall serve; and this done, you shall dig the Pond of such depth, as the earth conveniently will bear, and casting the earth upon either side, you shall make the Banks as large and strong as the ground requireth; then if any Spring which did before feed the earth be left out of the compass of the Pond (because it lieth too high to be brought in) then shall you by drawing gutters or drains from the Spring down to the pond, bring all the waters of the Springs into the Pond, and so continually feed it with fresh and sweet water. Then storing it with fish of best esteem, as *Carp*, *Tench*, *Beam*, *Pearch*, and such like, and keeping it from weeds, filth and vermine, there is no doubt of the daily profit.

But if this marish and low ground, though it lie low, and have many Springs falling upon it, yet it lieth not so extreme low but that there is some River or dry Ditches bordering upon it, which lie in a little lower descent, so that except in case of

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inundation the river and ditches are free from the moisture of this ground, but where there is any over-flowing of waters, there this marsh ground must needs be drowned; in this case, this ground can hardly be made for Corn, because every overflow putteth the Grain in danger, yet may it be well converted to excellent pasture or meadow, by finding out the heads of the Springs, and by opening and cleansing them, and then drawing from those cleansed heads, narrow drains or furrows, through which the waters may pass to the neighbours ditches, and so be conveyed down to the low Rivers: leaving all the rest of the ground dry, and suffering no moistures to pass, but what goeth through these small deep Channels; then as soon as Summer cometh, and the ground begins to harden, if you see any of the water stand in any part of the ground, you shall forthwith mend the drain, and help the water to pass away; which done, (as the ground hardneth) you shall with hacks and spades lay the swarth smooth and plain; and as early in the year, as you can conveniently, you shall sow upon the ground good store of Hay-seeds, and if also you do manure it with the rotten staddles or bottoms of hay-stacks, it will be much the better, and this staddle you shall not spread very thick, but rather of a reasonable thinness, that it may the sooner rot and consume upon the same.

But if this marsh and filthy ground do not lye so low as these low valleys, but rather against the tops of hills; you shall then, first open the heads of all the springs you can find, and by several drains or sluices, draw all the water into one drain, and so carry it away into some neighbouring ditch and valley; and these drains you shall make of a good depth, as at least two foot, or 2 foot and a half, or more, if need require, and then cross-wise every way overthwart the ground, you shall draw more shallow furrows, all which shall fall into the former deep drains, and so make the ground as constant, and firm as may be: then having an intent to imploy it for corn, you shall bring your Plow into the ground, being a very strong one, and not much differing in Timber-work, or Irons from that which turneth up the Clay-grounds, and laying before the Plow long waddes, or rous of the straw of Lupins, Pease, or else Fetches, (but Lupins is

Draining of
wet grounds.

the best) you shall turn the furrows of the earth with the plow upon the wades, and so cover or bury them in the mould, and thus do unto every furrow, or at least unto most of the furrows you turn up, and so let it lye a little time to rot, as by the space of a fortnight or three weeks, in which space, if the ground receive not rain and moisture enough to rot the straw thus formerly buried, you shall then by stopping the drains, making the Springs over-flow, gently wash the ground all over and no more, and then presently drain it again; which done, as soon as the earth is dry, you shall hack it, and break it into small pieces, and then you shall also sand it, lime it, and manure it.

And lastly, you shall Marl it, but if no salt sand be to be had, then instead of it you shall chalk it, yet of all the rest you shall take the least part of chalk.

This done, about the latter end of *July* you shall plow up the ground again with somewhat a better and deeper sitch than you did before, that if any of the straw be unrotted, or unconsumed, it may again be raised up with the new moyst earth, and so made to waste more speedily; and if at this second carrying you do see any great hard clots to rise, then with your haks you shall break those hard clots in pieces, laying the Land clean without clots, weeds, or any other annoyance, and so let it rest till *October*, at which time you shall plough it over again, hack it, harrow it, and then sow it with the best Seed-wheat; for this soyl thus drest and manured, albeit it be of all other the most barren, yet by reason of this moisture, which at pleasure may be put to it, or taken from it, and the mixture of these comfortable soyles and composts, it is made as good and fruitful as any earth whatsoever, and will bear Wheat abundantly for the space of three years together, then good Barley the fourth year, with a little help of a Sheep-fold, or Sheeps manure; then Rye the fifth year; Oats the sixth, the seventh and eighth years; small Pease the ninth year; good meadow or pasture three years following, and then to be new drest again, as before said.

Harrowing.

Now as soon as your Seed-Wheat is sown, you shall then harrow the ground again, and be sure to cover the Wheat both deep and close, as for the clots, which shall arise from this soyl,

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
it shall not matter whether you break them or no, for by reason of their moisture, they will be plyant and easie for the Wheat to pass through, so that you shall not care how rough your land lye, so it lye clean, and the Corn well covered; but for all other seeds, you shall break the clots to dust, and lay the land as smooth as may be.

Now for the weeding of this soyl, you will not be much troubled therewith, because this ground naturally of its own accord putteth forth no weeds, more than those which are ingendred by the new made fruitfulness thereof, and those weeds for the most part are a kind of small sedge, or hollow reeds; any of which if you see appear, or with them any other kind of weed, you shall at the first appearance, either pull them up by the roots with your wooden nippers, or else cut them close by the ground with your weed-hooks.

CHAP. X.

A general way for the enriching of any poor arable ground, either Clay or Sand, with less charge than formerly.

IF the former demonstrations and instructions which I have shewed thee, appear neither too difficult, or too costly (for now I speak to thee plain, simple, poor Husbandman) and yet thou art master of none but barren earth, then thou shalt by thine own industry, or the industry of thy Children, Servants, and such like, or by contracting with Taylors, Botchers, or any poor people that will deserve a penny, gather up, get or buy all the rags, shreds, old base pieces of woollen cloth whatsoever, which are onely cast, and fit for nothing but the Dung-hill, and of these thou canst compass but a sackfull, or a sackfull and a half, it is sufficient for the dressing of an acre of arable ground. These shreds and rags (torn small) or hackt and hewed into small pieces or bits, thou shalt thinly spread over the land before fallowing time, then coming to fallow, plough them all into the ground, & be sure to cover them, then give your land the rest of its ardors, as stirring, soyling, ridging, &c. in their due seasons, and after an husbandly manner: then when you come to sow it, you shall take

 Rags of woollen cloth.

Steeping of
seed corn.

the slimie thick water which commeth from dung-hills, or for want thereof, water in which Cow-dung hath been steeped, and therein you shall steep your seed-corn; that is to say, if it be barley, you shall steep it for the space of thirty six hours, or thereabouts; if it be Wheat, but eighteen hours; and if it be Pease, but twelve hours; for Rye, or Oats, not at all: and the seed thus steeped, you shall sow it according to good Husbandry, and there is no doubt of wonderfull increase.

Or any pulse.

There be others which take the Seed-corn, and steeping it in good store of Cow-dung, and water, stir all together for an hour in the morning, and an hour at night, and then being settled, drain the water from the seed and the dung, and the next morning sow the corn and the dung both together on the land, being sure not to scant the Land of Seed, and no doubt the increase will be wonderfull.

Now if this cannot be conveniently done, or that you want dung, if then you take ordinary water, and therein steep your seed, it is good also, and especially for barley, and is approved by daily experience.

Shavings of
Horn.

But now me-thinks, I hear the poor man say, that here is but one acre dress, and that is a small proportion; to this I answer, If thou beest able but to dress one acre with these woollen raggs, thou shalt then search among the Horners, Tanners, Lanthorn-makers, and such like; and get all the wast shavings of horn which thou canst possibly compass, as before of the raggs, so of these a sack and a half, or two sacks will dress an-acre: these shavings (which are indeed good for no other use) you shall scatter upon the land as you did the raggs, then plow them in after the same manner, so order the ground, so sow, and in the same manner steep the seed; and questionless the increase will be wonderfull great: These manures will last five years without any renewing. Now if of these you cannot get sufficient to trim all your ground, you shall then deal with Butchers, Sowse-women, Slaughter-men, Scullions, and the like; and from these you shall get all the hoofs you can, either of Oxe, Cow, or Bull, Calf, Sheep, Lamb, Deer, Goates, or any thing that cheweth the cud; and which indeed, if not for this use, are otherwise utterly cast away to the dunghill, and despised: And these hoofs

Hoofs of cat-
tella.

you shall cut and hew into small picces, and scatter thick upon your land at fallowing time, then plow them in, as foresaid, and do in all points as with the other manures already recited, and so steep your seed, and there cannot be a greater enricher of arable ground whatsoever.

Now if all these will not yet compost your land, you shall then see what sope-ashes you can get, or buy, for of all manures there is none more excellent, for besides, it giveth an exceeding strength and fatness to the Land; it also killeth all manner of weeds, great and small, as Broom, Gorse, Whinnes, and the like, and it killeth all manner of Worms, & venomous creeping things; it is excellent for Woad, & the ground renewed yearly therewith, may be sown continually: These sope-ashes must be laid on the Land after fallowing, and then stirred in; two load thereof will

Of Woad.

serve to dress an acre: when it is fit for seed, the seed must be steeped as afore said, and then sown, and the increase will quit the charge manifold. These sope-ashes are also excellent good for Hemp, and Flax, being thinly sown upon the Land, after it is plowed, and immediately before the Seed be sown: but if you have more Land to dress, then you must make use of your own ordinary manure, as is Oxe-dung, Horse-dung, and the like, which that you may make richer and stronger than otherwise of its own nature it would be, you shall cause continually to be thrown upon it, all your powdered beef broths, and all other salt broths or brines, which shall grow or breed in your houses; also all manner of soap suds, or other suds, and washings, which shall proceed from the Laundry; and this will so strengthen and enrich your manure, that every load shall be worth five of that which wanteth this help. There be divers other manures, which do wonderfully enrich and fatten all manner of barren grounds, as namely, the hair of beasts hides, (which for the most part, Tanners and Glovers do cast away) this thinly spread on the Land, and plowed in, brings every year a fruitfull crop. Again, if Braken, or Fern be layed a foot thick upon the earth, and then a layer of earth upon it, then another layer of braken, and a layer of earth upon it, then another layer of braken, and another layer of earth, and so layer upon layer, till the heap be as bigg as you intend it, and so left to rot all the Winter following, there cannot be a better

The enriching of ordinary manure.

The hairs of beasts hides.

Of braken.

To rot dung
quickly.

manure for any arable ground ; for you shall understand, that the earth will so rot the braken, and the braken so soak into the earth, that they will become both one rich substance. And herein you shall note, that whensoever you would have any substance (of what condition soever) quickly to rot, and turn to manure, that the only way is, to mix it with earth, and that will in short space bring it to rottenness. Now this braken and earth thus rotted, you shall lay upon your land as you do your ordinary dung of Cattel, and then sow your seed being steeped as aforesaid.

Of Malt-dust.

Next, your Malt-dust, which is the sprout, come, smytham, and their excrements of the Malt, as an excellent manure for arable land, allowing three quarters thereof for an acre, and strowing it upon the land after it is plowed, and ready to be sown.

Of Rotten
Pilchers and
garbage.

There is another manure which albeit it is not plentiful every where, yet in some places it is, and not inferior to any manure before spoken of, and that is your rotten Pilchers after the oyl is taken from them, & the carcasses cast to the dungill, this laid on the land, and plowed in, bringeth Corn in great abundance; and no less doth the carcasses, and garbage of all kind of fish whatsoever, especially of sea-fish.

Of blood of
fals.

Lastly, the blood entralls, and offall of any beast, is an excellent manure of any kind of grain, plant, or tree, but especially for the Vine, for to it there is no nourishment of greater force or efficacy : also, if this blood be tempered with lime, it is exceeding comfortable for grain, and destroyeth worms, and other creeping things, which hurt Corn, only it must not be applyed presently, but suffered for a little time to rot, lest the too much heat thereof might scorch and do hurt to the root of the Corn : this manure is to be laid on the earth when you sow it, & sow the seed, and it harrowed or plowed in together ; which done, after the order of good workmanship, there is no doubt of the encrease.

CHAP. II.

*How to Enrich for Corn, any barren, rough, woody ground,
being newly stubbed up.*

IF you have any barren woody ground, which is newly stubbed up, and that you would convert it to arable, you shall then take a great quantity of the underwood, or worst brush wood which was cut from the same, and in the most convenient place in the field, as in the midst, or near thereabout, you shall frame it into a broad hollow pile, and then cover it all over with great sods of earth, which done, set fire on it, and leave no part thereof (either wood or earth) unburnt; then take those ashes and spread them all over the field, so far forth as you mean to plough up, then with a good strong plough follow the ground as deep as you can, and so let it rest till it be almost May, then take either Fern, Stubble, Straw, Heath, Furrs, Sedge, Bean stalks, or any other waste growth, take I say, either any one, or more of these, or altogether, as you stand possess of them, and burn them to ashes, and therewith cover your land the second time; and then in summer stirr it within a Month, after soyl it, then at the beginning of October, or a little before, plough it again, and sow it with Rye the first crop, and you shall see the increase will be very plentiful; the next year you may sow it with Wheat, the third year with Barley, the fourth year with Pease, Lupins, Fetches, or any other pulse, and then begin with Wheat again; for it is credibly said, that this manner of dressing these barren, woody grounds, shall maintain and keep the earth in good heart, and strength in the worst places, for the space of four years, in that which is in any thing reasonable for the space of six years, and where there is any small touch of fertility, for the space of sixteen years; of which there are daily experiences in France, about the Forrest of Arden, and some with us here in England, in many woody places.



Wood ashes.

Ashes of Fern.
Straw, &c.

CHAP.

CHAP. XII.

The manner of reducing and bringing into their first perfection all sorts of grounds, which have been over-flowed, or spoiled by salt-water, or the Sea-breach, either arable or pasture, as also the enriching, or bettering of the same.

The difficulty
of this labour.

The vertues
of Salt.

The vices
which come
from Salt.

THere is nothing more hard or difficult in all the art of husbandry, then this point of which I am now to intreat; as namely, the reducing and bringing unto their first perfection all sorts of grounds, which have been over-flowed, or else spoiled by the Sea-breach, and bringing in of so great abundance of salt-water, which to some men of little experience, and free from those dangerous troubles, may appear a matter very sleight, and the wound most easie and curable; and the rather, because in all my former relations, and demonstrations, touching the bettering of ever several sort of ground, I do apply, as one of my chiefest ingredients, or simples, by which to cure Barrenness, Salt-sand, salt-weeds, salt-water, salt-brine, Ashes, Lime, Chalk, and many other things of salt nature, as indeed all the manures and marles whatsoever, must either have a salt quality in them; or they cannot produce fruitfulness, so that to argue simply from natural reason; If salt be the occasion of fruitfulness, and increase, then there cannot be much hurt done by these over-flowes of the salt-writer, that it should rather add a fattening and enriching to the ground, then any way to impoverish it; and make it incapable of growth or burthen. But experience, (which is the best Mistress) shews us the contrary, and there is nothing more noisome and pestilent to the earth, then the super-abundance, and too great excess of saltness; for according to our old Proverb, of *omne nimium*, that too much of every thing is vitious, as we see in the state of man's body, that your strongest poysons, as *Antimony*, or *Stribium*, *Coloquinida*, *Rhubarb*, and the like, taken in a moderate measure, are almost healthfull, and expell those malignant qualities which offend the body, and occasion sickness; but taken in the least excess that can be devised, they then (out of their vitious and naughty qualities) do suddenly and violently destroy all heat, and bring upon the body

inundation, the river and ditches are free from the moisture of this ground, but where there is any over-flowing of waters, there this marsh ground must needs be drowned; in this case, this ground can hardly be made for Corn, because every over-flow putteth the Grain in danger, yet may it be well converted to excellent pasture or meadow, by finding out the heads of the Springs, and by opening and cleansing them, and then drawing from those cleansed heads, narrow drains or furrows, through which the waters may pass to the neighbours ditches, and so be conveyed down to the low Rivers: leaving all the rest of the ground dry, and suffering no moistures to pass, but what goeth through these small deep Channells; then as soon as Summer commeth, and the ground begins to harden, if you see any of the water stand in any part of the ground, you shall forthwith mend the drain, and help the water to pass away; which done, (as the ground hardneth) you shall with hacks and spades lay the swarth smooth and plain, and as early in the year, as you can conveniently, you shall sow upon the ground good store of Hay-seeds, and if also you do manure it with the rotten staddles or bottoms of hay-stacks, it will be much the better, and this staddle you shall not spread very thick, but rather of a reasonable thinness, that it may the sooner rot and consume upon the same.

But if this marsh and filthy ground do not lye so low as these low valleys, but rather against the tops of hills; you shall then, first open the heads of all the springs you can find, and by several drains or sluices, draw all the water into one drain, and so carry it away into some neighbouring ditch and valley; and these drains you shall make of a good depth, as at least two foot, or 2 foot and a half, or more, if need require, and then cross-wise every way overthwart the ground, you shall draw more shallow furrows, all which shall fall into the former deep drains, and so make the ground as constant, and firm as may be: then having an intent to imploy it for corn, you shall bring your Plow into the ground, being a very strong one, and not much differing in Timber-work, or Irons from that which turneth up the Clay-grounds, and laying before the Plow long waddes, or rous of the straw of Lupins, Pease, or else Fetches, (but Lupins is

Draining of
wet grounds.

the best) you shall turn the furrows of the earth with the plow upon the wades, and so cover or bury them in the mould, and thus do unto every furrow, or at least unto most of the furrows you turn up, and so let it lye a little time to rot, as by the space of a fortnight or three weeks, in which space, if the ground receive not rain and moisture enough to rot the straw thus formerly buried, you shall then by stopping the drains, making the Springs over-flow, gently wash the ground all over and no more, and then presently drain it again; which done, as soon as the earth is dry, you shall hack it, and break it into small pieces, and then you shall also sand it, lime it, and manure it.

And lastly, you shall Marl it, but if no salt sand be to be had, then instead of it you shall chalk it, yet of all the rest you shall take the least part of chalk.

This done, about the latter end of *July* you shall plow up the ground again with somewhat a better and deeper stich than you did before, that if any of the straw be unrotted, or unconsumed, it may again be raised up with the new moist earth, and so made to waste more speedily; and if at this second carrying you do see any great hard clots to rise, then with your hacks you shall break those hard clots in pieces, laying the Land clean without clots, weeds, or any other annoyance, and so let it rest till *October*, at which time you shall plough it over again, hack it, harrow it, and then sow it with the best Seed-wheat; for this soyl thus drest and manured, albeit it be of all other the most barren, yet by reason of this moisture, which at pleasure may be put to it, or taken from it, and the mixture of these comfortable soyles and composts, it is made as good and fruitful as any earth whatsoever, and will bear Wheat abundantly for the space of three years together, then good Barley the fourth year, with a little help of a Sheep-fold, or Sheeps manure; then Rye the fifth year; Oats the sixth, the seventh and eighth years; small Pease the ninth year; good meadow or pasture three years following, and then to be new drest again, as before said.

Harrowing.

Now as soon as your Seed-Wheat is sown, you shall then harrow the ground again, and be sure to cover the Wheat both deep and close; as for the clots, which shall arise from this soyl,


it shall not matter whether you break them or no, for by reason of their moisture, they will be plyant and easie for the Wheat to pass through, so that you shall not care how rough your land lye, so it lye clean, and the Corn well covered; but for all other seeds, you shall break the clots to dust, and lay the land as smooth as may be.

Now for the weeding of this soyl, you will not be much troubled therewith, because this ground naturally of its own accord putteth forth no weeds, more than those which are ingendred by the new made fruitfulness thereof, and those weeds for the most part are a kind of small sedge, or hollow reed; any of which if you see appear, or with them any other kind of weed, you shall at the first appearance, either pull them up by the roots with your wooden nippers, or else cut them close by the ground with your weed-hooks. Weeding.

CHAP. X.

A general way for the enriching of any poor arable ground, either Clay or Sand, with less charge than formerly.

IF the former demonstrations and instructions which I have shewed thee, appear neither too difficult, or too costly (for now I speak to thee plain, simple, poor Husbandman) and yet thou art master of none but barren earth, then thou shalt by thine own industry, or the industry of thy Children, Servants, and such like, or by contracting with Taylors, Botchers, or any poor people that will deserve a penny, gather up, get or buy all the rags, shreds, old base pieces of woollen cloth whatsoever, which are onely cast, and fit for nothing but the Dung-hill, and of these thou canst compass but a sackfull, or a sackfull and a half, it is sufficient for the dressing of an acre of arable ground. These shreds and rags (torn small) or hackt and hewed into small pieces or bits, thou shalt thinly spread over the land before fallowing time, then coming to fallow, plough them all into the ground, & be sure to cover them, then give your land the rest of its ardors, as stirring, soyling, ridging, &c. in their due seasons, and after an husbandly manner: then when you come to sow it, you shall take

 Rags of woollen cloth.

Steeping of
seed corn.

the slimie thick water which commeth from dung-hills, or for want thereof, water in which Cow-dung hath been steeped, and therein you shall steep your seed-corn; that is to say, if it be barley, you shall steep it for the space of thirty six hours, or thereabouts; if it be Wheat, but eighteen hours; and if it be Pease, but twelve hours; for Rye, or Oats, not at all: and the seed thus steeped, you shall sow it according to good Husbandry, and there is no doubt of wonderfull increase.

Or any pulse.

There be others which take the Seed-corn, and steeping it in good store of Cow-dung, and water, stir all together for an hour in the morning, and an hour at night, and then being settled, drain the water from the seed and the dung, and the next morning sow the corn and the dung both together on the land, being sure not to scant the Land of Seed, and no doubt the increase will be wonderfull.

Now if this cannot be conveniently done, or that you want dung, if then you take ordinary water, and therein steep your seed, it is good also, and especially for barley, and is approved by daily experience.

Shavings of
Horn.

But now me-thinks, I hear the poor man say, that here is but one acre dress, and that is a small proportion; to this I answer, If thou beest able but to dress one acre with these woollen raggs, thou shalt then search among the Horners, Tanners, Lanthorn-makers, and such like, and get all the wast shavings of horn which thou canst possibly compass, as before of the rags, so of these a sack and a half, or two sacks will dress an acre: these shavings (which are indeed good for no other use) you shall scatter upon the land as you did the rags, then plow them in after the same manner, so order the ground, so sow, and in the same manner steep the seed; and questionless the increase will be wonderfull great: These manures will last five years without any renewing. Now if of these you cannot get sufficient to trim all your ground, you shall then deal with Butchers, Sowse-women, Slaughter-men, Scullions, and the like; and from these you shall get all the hoofs you can, either of Oxe, Cow, or Bull, Calf, Sheep, Lamb, Deer, Goates, or any thing that cheweth the cud, and which indeed, if not for this use, are otherwise utterly cast away to the dunghill, and despised: And these hoofs

Hoofs of cat-
telli.

you

you shall cut and hew into small pieces, and scatter thick upon your land at fallowing time, then plow them in, as foresaid, and do in all points as with the other manures already recited, and so steep your seed; and there cannot be a greater enricher of arable ground whatsoever.

Now if all these will not yet compost your land, you shall then see what sope-ashes you can get, or buy, for of all manures there is none more excellent, for besides, it giveth an exceeding strength and fatness to the Land; it also killeth all manner of weeds, great and small, as Broom, Gorse, Whinnes, and the like, and it killeth all manner of Worms, & venomous creeping things; it is excellent for Woad, & the ground renewed yearly therewith, may be sown continually: These sope-ashes must be laid on the Land after fallowing, and then stirred in; two load thereof will serve to dress an acre: when it is fit for seed, the seed must be steeped as aforesaid, and then sown, and the increase will quit the charge manifold. These sope-ashes are also excellent good for

Of Woad.

Hemp, and Flax, being thinly sown upon the Land, after it is plowed, and immediately before the Seed be sown: but if you have more Land to dress, then you must make use of your own ordinary manure, as is Oxe-dung, Horse-dung, and the like, which that you may make richer and stronger than otherwise of its own nature it would be, you shall cause continually to be thrown upon it; all your powdred beef broth, and all other salt broths or brines, which shall grow or breed in your house; also all manner of soap suds, or other suds, and washings, which shall proceed from the Laundry, and this will so strengthen and enrich your manure, that every load shall be worth five of that which wanteth this help. There be divers other manures, which do wonderfully enrich and fatten all manner of barren grounds, as namely, the hair of beasts hides, (which for the most part, Tanners and Glovers do cast away) this thinly spread on the Land, and plowed in, brings every year a fruitfull crop. Again, if Braken, or Fern be layed a foot thick upon the earth, and then a layer of earth upon it, then another layer of braken, and a layer of earth upon it, then another layer of braken, and another layer of earth, and so layer upon layer, till the heap be as bigg as you intend it, and so left so rot all the Winter following, there cannot be a better

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manure for any arable ground ; for you shall understand, that the earth will so rot the braken, and the braken so soak into the earth, that they will become both one rich substance. And herein you shall note, that whensoever you would have any substance (of what condition soever) quickly to rot, and turn to manure, that the only way is, to mix it with earth, and that will in short space bring it to rottenness. Now this braken and earth thus rotted, you shall lay upon your land as you do your ordinary dung of Cattel, and then sow your seed being steeped as aforesaid,

Of Malt-dust.

Next, your Malt-dust, which is the sprout, come, smytham, and their excrements of the Malt, as an excellent manure for arable land, allowing three quarters thereof for an acre, and strowing it upon the land after it is plowed, and ready to be sown,

Of Rotten
Pilchers and
garbage.

There is another manure which albeit it is not plentiful every where, yet in some places it is, and not inferior to any manure before spoken of, and that is your rotten Pilchers after the oyl is taken from them, & the carcasses cast to the dungill, this laid on the land, and plowed in, bringeth Corn in great abundance; and no less doth the carcasses, and garbage of all kind of fish whatsoever, especially of sea-fish.

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Lastly, the blood entralls, and offall of any beast, is an excellent manure of any kind of grain, plant, or tree, but especially for the Vine, for to it there is no nourishment of greater force or efficacy : also, if this blood be tempered with lime, it is exceeding comfortable for grain, and destroyeth worms, and other creeping things, which hurt Corn, only it must not be applied presently, but suffered for a little time to rot, lest the too much heat thereof might scorch and do hurt to the root of the Corn : this manure is to be laid on the earth when you sow it, & sow the seed, and it harrowed or plowed in together ; which done, after the order of good workmanship, there is no doubt of the encrease.

CHAP. II.

*How to Enrich for Corn, any barren, rough, woody ground,
being newly stubbed up.*

If you have any barren woody ground, which is newly stubbed up, and that you would convert it to arable, you shall then take a great quantity of the underwood, or worst brush wood which was cut from the same, and in the most convenient place in the field, as in the midst, or near thereabout, you shall frame it into a broad hollow pile, and then cover it all over with great sodds of earth, which done, set fire on it, and leave no part thereof (either wood or earth) unburnt, then take those ashes and spread them all over the field, so far forth as you mean to plough up, then with a good strong plough fallow the ground as deep as you can, and so let it rest till it be almost May, then take either Fern, Stubble, Straw, Heath, Furrs, Sedge, bean stalks, or any other waste growth, take I say, either any one, or more of these, or altogether, as you stand possess'd of them, and burn them to ashes, and therewith cover your land the second time, and then in summer stirr it within a Month, after soyl it, then at the beginning of *October*, or a little before, plough it again, and sow it with Rye the first crop, and you shall see the increase will be very plentiful; the next year you may sow it with Wheat, the third year with Barley, the fourth year with Pease, Lupins, Fitches, or any other pulse, and then begin with Wheat again; for it is credibly said, that this manner of dressing these barren, woody grounds, shall maintain and keep the earth in good heart, and strength in the worst places, for the space of four years, in that which is in any thing reasonable for the space of six years, and where there is any small touch of fertility, for the space of sixteen years; of which there are daily experiences in *France*, about the Forrest of *Arden*, and some with us here in *England*, in many woody places.



Wood ashes.

Ashes of Fern.
Straw, &c.

CHAP. XII.

The manner of reducing and bringing into their first perfection all sorts of grounds, which have been over-flowed, or spoiled by salt-water, or the Sea-breach, either arable or pasture, as also the enriching, or bettering of the same.

The difficulty
of this labour.

The vertues
of Salt.

The vices
which come
from Salt.

THERE is nothing more hard or difficult in all the art of husbandry, then this point of which I am now to intreat; as namely, the reducing and bringing unto their first perfection all sorts of grounds, which have been over-flowed, or else spoiled by the Sea-breach, and bringing in of too great abundance of salt-water, which to some men of little experience, and free from those dangerous troubles, may appear a matter very sleight, and the wound most easie and curable; and the rather, because in all my former relations, and demonstrations, touching the bettering of ever several sort of ground, I do apply, as one of my chiefest ingredients, or simples, by which to cure Barrenness, Salt-Sand, salt-weeds, salt-water, salt-brine, Athes, Lime, Chalk, and many other things of salt nature, as indeed all the manures and marles whatsoever, must either have a salt quality in them, or they cannot produce fruitfulness, so that to argue simply from natural reason; If salt be the occasion of fruitfulness, and increase, then there cannot be much hurt done by these over-flows of the salt-wrter, that it should rather add a fattening, and enriching to the ground, then any way to impoverish it, and make it incapable of growth or burthen. But experience, (which is the best Mistress) shews us the contrary, and there is nothing more noisome and pestilent to the earth, then the super-abundance, and too great excess of saltness; for according to our old Proverb, of *omne nimium*, that too much of every thing is vicious, as we see in the state of man's body, that your strongest poysons, as *Antimony*, or *Stibium*, *Coloquintida*, *Rhubarb*, and the like, taken in a moderate measure, are almost healthfull, and expell those malignant qualities which offend the body, and occasion sickness; but taken in the least excess that can be devised, they then (out of their vicious and naughty qualities) do suddenly and violently destroy all heat, and bring upon the body

body inevitable death, and mortality; so is it with this matter of salt, and the body of the earth; for as by the moderate distributing thereof, it correcteth all barren qualities, disperseth cold, and naughty vapours, and yieldeth a kind of fatness and fruitfulness, whereby the Seed is made more apt to sprout, and the ground more strong or able to cherish the same, till it come to perfection, through the sharp, warm, and dispersing quality thereof; so being bestowed in too great abundance and excess, The abuse of salt in excess. whereby the earth is surfeited, and as it were overcome, and drowned up with too much of this natural goodness, and helpful quality, then all his proper vertues turn to egregious vices, as his wholesome sharpness to a fretting, gnawing, and destroying greediness, his comfortable warmth to a consuming and wasting fierceness, and his gentleness in dispersing to an infectious and venomous pollution, by the joynt qualities of all which together, the ground is made neither fit to receive any thing from the hand of the Husbandman, nor yet to produce or bring forth any of it self, because every good quality is abused or expelled; and nothing but unnaturalness, and sterility left, which like a Serpent lodgeth in the ground, and will suffer no good thing to have society with it: And these are the effects and mischiefs which are occasioned by these Sea-breaches, or inundations of the salt-water.

It is certain, that although in the salt marshes, where the Sea cometh in at certain times, and only washeth or sprinkleth the ground all over. and so departeth, there is neither want of grass, nor yet complaint of any evil quality in the grass; yet it is most certain, that no overflow of Salt-water, how little or moderate soever, can be truly said to be wholesome for any kind of grass-ground whatsoever; for grass is compounded of an infinite world of plants and simples, and most of them of several natures and qualities, so that if it give nourishment to one, yet it may destroy ten; neither do I find it by any of the Antients, simply and properly applied unto the grass grounds, but first unto the arable, in which having spent its primary, or first strength upon the seed, (which is a great and greedy devourer, or eater up of the strength, and fatness of the earth) it then prepares and makes the ground more able and fit to bring

Of salt moderately used.

No overflow of salt water good for grass.

The grounds
of the salt
Marshes.

forth grass, and that of the best and finest kind : for although the Masters of the Salt-marshes find a singular and rare profit in those grounds for the feeding, breeding, fattening, and sustaining of their great Flocks of Sheep ; which upon these Salt grounds, they say they will never rot or perish by that universal Disease ; yet they must not impute it to the great quantity, goodness, or any growth in the grass, but to the salt which they lick up in the grass, and to the salt quality of the grass, which is not only an Antidote or preservative against that noysom and pestilent mortality, but also a delightful and pleasant food wherein those Cattle take more contentment than in any other thing whatsoever ; so that I must necessarily rest upon this Conclusion, that as more moderate washing and overflowing of Salt-waters are no certain or particular great helps unto grass-grounds, especially if they be applied thereunto, and to that purpose simply at the first, without any other preparative or working by a former means, as by tillage, digging, delving, or the like ; so the exceeding great Inundation, or Sea-breaches which lie long soaking and sinking into the earth, must needs be a certain infallible, and almost incurable cause of barrenness, eating, spoiling, and consuming the very roots of all manner of plants, trees, and growths, by which the ground is made utterly incapable of generation or bringing forth : and therefore where these great inundations or over-flowings cannot be either prevented or avoided, but as the seasons of the year, they do and must hold their courses ; there I would not wish any man to bestow either his labour or his cost, for it is loss of time, and loss of substance : but where it is to be prevented or avoided by industry, or that those over-flowing or Sea-breaches come and happen by casualty or change, as either by the unnaturalness and superabundance of Tides being driven in by the violence and impetuosity of outrageous winds, or by any neglect or breach in the Sea-wall, or other mishaps of the like nature, which hapneth sometimes scarce once in an Age, at the most not above once or twice in many years ; in these cases there is most certain remedy, and the ground so spoiled and wasted, may by art and industry be again reduced and brought to the former perfection and goodness ; nay, many times amended and

A true cause
of barrenness.

Where this
annoyance is
incurable.

Where it is
curable.

freed.

freed from many faults and sterile qualities, to which it was either naturally addicted, or else by chance and accident grew thereunto, by continual wearing and imployment without rest or refreshing, by the artificial means of wholsom manures, or other strengthnings which ought to be applied before those faults grow in extremities.

Now touching the cure of these grounds which are thus worn out, decayed and made barren by these inundations of Salt-water, the owner thereof is first to draw into his consideration, that as the malignity and evil quality of the earth is grown by too much fretting, gnawing, and wasting of the Salt, so it must be allayed and qualified by a quite contrary condition, which is freshness: the contrary then to Salt-water, must of necessity be fresh-water, so that you are to cast about your judgment, and by the view, situation, and level of the ground (which for the most part earth have but little difficulty in it, because these grounds upon which the Sea thus breaketh, must ever be the lowest of all other, so that a true descent coming into it, and a true ascent coming from it, there is no hardness to convey any water-course thereunto) look how to bring a freshness which may conquer and overcome this fatness, and that must therefore be fresh water, which by channels, ditches, furrows, sluices, and the like you may bring from any fresh river, spring, pond, or other fresh-water course (though removed some distance of miles from the place to which you would convey it) to the very place to which you desire to have it, and with this fresh water you shall wash and gently drown over so much of your spoiled ground as you shall be able reasonably to deal withal, in other costs and labour for that year; and if you have plentiful store of fresh water, then having (as I said) drowned it over gently, about four inches, or half a foot deep, you shall so let it lie two or three days, then drain away that water by the help of back ditches, or by sluices made for that purpose, which if the situation of the ground deny you, and that there is no such convenient conveyance, then you shall in the lowest part of the ground (either joyning upon some other spoiled ground, or upon the Sea-wall or bank) place a Coy, which may either cast the water into the other ground, or else over the wall

The manner of the cure.

One contrary helps another.

The watering with fresh water.

How to draw away the fresh water.

How oft to
drown the
earth.

and bank into the Sea; and having thus drained away the first water, you shall then open your sluices of fresh water again, and drown your ground over the second time, and do in all things as you did before, and thus according to the plentifulness of your fresh water, you shall drown your ground, or at least wash it over with fresh water twice a week, before the beginning of the Spring; and if the Salt-water have lain long, or be but new departed, then you shall use your fresh water, for some part of the Spring also.

Helps, if fresh
water be want-
ing.

Whether brack-
ish water be
wholsome.

Now some may object unto me here, (and it is a matter altogether unlikely) that in some of these places, where these Inundations and Breaches are, it is impossible either to find fresh water, and to bring fresh water unto them, because all the springs for many miles about, being made naturally blackish, and the rivers by the infection of the salt tides, having lost the greatest part of their sweet freshness; the Question now respecteth, whether these brackish waters are wholsome for this purpose, I, or No? To this I must needs answer, That they cannot in any wise be good for those spoiled grounds, because the earth naturally of an attractive and drawing condition, sucking and gathering unto it self any that is of a sharp sweet, or sower taste, and especially saltness; so that being covered with those brackish waters, it will draw from them only their salt, (of which it hath too much already) and no part of the freshness which should qualifie and amend it: therefore, if either your ground be thus situated, or your necessities thus unsupplied, it is better, that you rather forbear this labor of washing or drowning your earth, (though it be the first, the speediest and surest cure of all other) than by watering it with infinite and unwholsome waters, rather encrease the mischief, than any way delay it.

The first time
of plowing, &
the observati-
ons therein.

How to mix
earth.

After you have watered your ground, (if it be a work possible to be attained unto) or otherwise neglected, (it being a thing not possible to be found) you shall then about the latter end of *March*, plow up all the ground with a good deep stich, turning up a large furrow, and laying it into lands, raise them up as much as you can, and make them round, then look

of.

of what nature or temper the earth is, as whether it be fine sand, rough gravel, stiff clay, or a mixt earth, or any of these contraries together: If it be a fine sand, either white, red, or brown, it matters not whether, then you shall take any clean earth which is free from these salt washings, being of a mean or small stiffness, and likewise of as mean and little richness, which being digged out of some bank, pit, or other place where least loils is to be had, you shall carry it in tumbrels or carriages to the new plowed ground, and there first lay it in heaps as you do manure; then after spread it over the Land, and being dry, with clotting beetles break it as small as you can possibly; for this hungry Clay being of no rich and fat condition, will so suck and draw the salt into it, that it will take away much of the evil quality, and mixing his tough quality with the loose condition of the sand, they will both together become apt for fruitfulness and generation.

If the spoiled ground be a rough hard gravelly earth, then you shall mix or spread upon it the best and richest fresh Clay you can get, or if there be any such fruitfulness near about you, then with a good blew Marle, for that is the coolest and the freshest, and will the soonest draw out the salt from the gravel, and give it a new nourishment, whereby any Seed shall be fed and comforted which is cast into it. The mixture of Gravel.

If the spoiled earth be of its own nature, a stiff and tough Clay, which is but seldom found so near the Sea-shore, then after the plowing you shall mix it, and cover it over with the freshest and finest Sand that you can possibly get, for that will not only separate the Salt from the Clay, and take away the natural toughness and stiffness of the same, which hindereth and suffocareth the tender sprouts, so as they cannot easily get out of the earth, but also by lending a gentle warmth, will assuage the cold quality of the Clay, and make it bring forth more abundantly. The mixture of Clay.

Lastly, if the same spoiled earth be of a mixed quality, then you shall look whether it be binding or loosening. If it be binding, then you shall mix or cover it with fine fresh sand; if loosening, then with a reasonable rich and tough clay, for so you shall bring it to an open and comfortable temper, making The mixture of mixt earth.

it able both to receive, cherish, and bring forth the Seed; which before either too much wet, or too much driness did stifle and bind up within the clots and mould, so as it had no strength to bear it self through the same.

The second
plowing.

Election of
Manures.

When you have covered your Lands with this mixture, you shall then plow it over again before Midsummer, turning the new laid earth unto the old earth, and as soon as that labour is finished, you shall then lade forth your manure or compost unto it, in which you are to have a great care what manure you elect for that purpose, for it is not the richest and fattest manure, as your Pigeons-dung, or Pullens-dung, Lime, Chalk, or Ashes, your Horse-dung, your shovelings upon High-ways, your beasts hoofs, your Horn shavings, your Hemp-weed, or any other Weed which groweth near the Sedge of the Sea, neither your Oxe, or Cow-dung, though of all before-named, that is the best, which doth the most good upon these spoiled grounds, because they have all in them a strong quality of saltness or sharpness, which will rather add than diminish the evil quality of the earth,

The best Ma-
nures.

but in stead of these, you shall take the mud of dried bottoms of Lakes, Ponds, and Ditches of fresh-water, and the moisture or wetter such mud or bottoms are, the better it is, or straw which is rotted by some fresh water-course, rain, or the like: by no means that which is rotted by the urine or stale of horse or cattle, for that is the saltest of all other; or you may take any Weeds which you see grow in fresh Rivers, Ditches, Ponds, or Lakes, especially those which grow at the bottoms of Willow, Sallow, or Osier-Trees; or you may take the old rags of woollen cloth, or any other manure which you know to be the woollest or freshest, and with any of these, or all those together, you shall very plentifully cover your ground all over, and immediately upon the covering or laying on, see you presently plow it, land after land; for to give it any long respite after it is spread, the Sun out of his attractive and strong natural will exhale and draw out all the vertue from your manure, and so spoil much of your labour.

The ordering
of the Manure

The third
plowing.

When you have thus manured it, and plowed it, you may then let it rest till *Michaelmas*, at which time you may plow it the last time, and then sow it with the strongest and hardest Wheat

Wheat you have, of which the white Pollard is the best, and there is no question but if it be safe from a second Inundation, your crop will be both plentiful and rich, and also acquit and pay largely for all your former charges. The second year you need but only plow it as aforesaid, and then sowe it with good Hempseed, and be assured you will have a brave crop arise thereof; then the third year you shall plow it as flat as you can, still throwing it down, and not raising it up at all, and then sowe it with the best Oats you can get, according to the nature and strength of your Country, and be sure to harrow it well, and to break every clot, and make the mould as fine as possible, and the next year after your Oats, lay it for grass, and I dare be bold, it will bear reasonable meadow; yet would I not have you this year to preserve it for that purpose, but rather to graze it with Sheep or Cattle, especially Sheep, of which I would have you lay on good store; for it matters not how near or close to the ground they eat it; for the next year it will become to the fulness of perfection, and be as profitable or more profitable ground than ever it was, and then you may apply or accommodate it for what use they please, either arable, Meadow, or for continual grazing.

The second
year sowing;
and third.

Laying the
earth for
grass.

And thus much touching the manner of reducing again, and bringing unto their first perfection, all sorts of grounds which have been over-flowed, or spoiled by Salt-water, or the Sea-breaches, whether it be arable or pasture; as also the enriching or bettering of the same.

Of grazing.

CHAP. XIII.

Another way to enrich barren Pastures, or Meadows, without the help of water.

IF your barren Pastures or Meadows be so seated; that there is no possible means of washing or drowning them with water, you are then only to restore and strengthen them by the efficacy of Manure or Soyl, without any other help, and this may divers ways be done, as by those manner of manurings, which I have formerly treated of. But to go a better, and briefer way to work, and more for the ease and capacity of the plain Husbandman,

Clay manure.

bandman, whensoever you shall be posselt of these barren pastures, if the barrenness proceed from sand, or gravel, then some Husbands use to manure the pasture over with the best Clay they can get, first laying it on heaps, then spreading it, and lastly, with clotting beetles breaking it into as fine dust as they can get it, and this labour they commonly perform as soon as they can after Harvest, when the latter spring is eaten, and the earth is most bare; but if the barrenness proceed from an hungry, cold, and

Moorish earth.

dry clay, then the manure is with the best moorish black earth which they can get, or with any moist manure whatsoever, especially, and above the rest, when the Soil that is digged out of old ditches, ponds, or dried-up standing lakes, and this earth must be laid plentifully upon the ground in manure heaps, as aforesaid, that is to say; first in great heaps, then after broken and dispersed over the whole ground; and lastly, broken into small dust, and mixed with the swarth of the ground, and this labour, as the other generally performed after the Harvest, as a time of most convenience, and giving the earth a fit respite to suck in the strength and comfort of the new earth, and also having all the Winter after with his frosts, snows, and showers, to mellow, ripen, and mix together one earth with the other: and doubtless this is a most exceeding good Husbandry, and not to be refell'd or carpt against by any knowing or sound judgment; only it is not the most absolute, or best of all ways whatsoever, but that others may be found somewhat more near, and somewhat more commodious.

The best way to enrich pasture or meadow.

Therefore, whensoever you shall be owner of any of these barren pastures, or meadows, of what nature or condition soever the earth be; whether proceeding from gravel, sand, clay, or pestered with any other malignant quality whatsoever, to reduce it to fertility and goodness in the shortest time, and to the most profit, about the Month of *March*, when all pasture grounds are at the barest, and do as it were remain at a stand between decreasing and increasing, you shall begin then to lead forth your manure for the refreshing of these Earths, and the manure which you shall carry unto these grounds, shall be the soil of streets within Cities or Towns, or the parings and gatherings up of the High-ways, much beaten with travel, also the earth

The Soil of the streets or High-ways.

for

for two or three foot deep, which lyeth under your dung-hill when the dung is removed, and carryed away, for this is most precious and rich mould, and is not alone excellent for this use, but also for the use of Gardens, for the strengthening and comforting of all sorts of tender plants; and for the use of Orchards, for the comforting both of old and young Trees, when at any time their Roots, are bared, or otherwise when there groweth any mislike or decreasing.

Earth under
Dung-hills.

To enrich
Gardens or
Orchards.

You shall also take the fine earth or mould which is found in the hollow of old Willow-trees, rising from the root up almost to the middle of the Tree, at least so far as the tree is hollow, for than this, there is no earth or mould finer or richer.

The mould
of Willow in
Trees.

Of all these manures, or of any one of them, or of as many as you can conveniently get, you shall lead forth so much as may very plentifully manure & cover your ground all over; you shall first lay it on the earth in reasonable big heaps, that the Sun may not exhale the goodness out of it, and then at your best leisure, & so soon as you can conveniently, you shall spread it. Universally over the field, dispersing it as equally as you can, unless your field be more barren in one place than in another, which if it be, then you shall lay the greatest plenty where it is most barren, and the less where you find the greatest fertility; yet, by all means, see you scant not any place, but give every one his due; for to do otherwise would shew much ill husbandry.

Now it is the use of some Husbandmen, that what mould or earth is laid out from six a clock in the morning, till three of the clock in the afternoon, that they make their Hinds spread in the evening before they go to supper; and questionless it is a very good course, and worthy to be imitated of every good Husband.

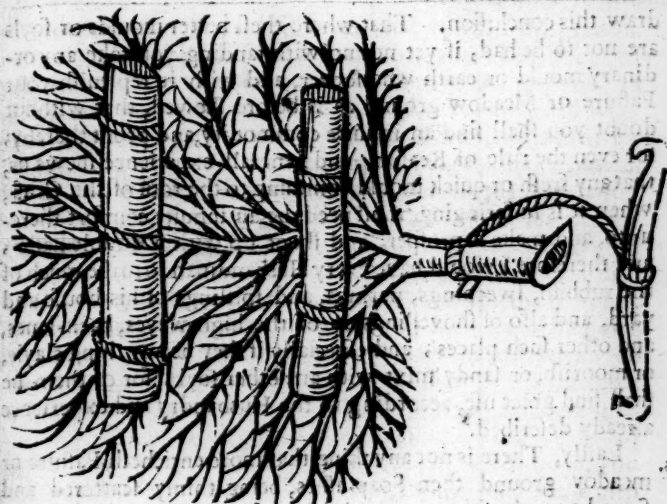
After you have laid forth your mould, and spread it all over your pasture or meadow, then you shall make some boyes, girles, or other people, to pick and gather up all the stones, sticks, or other unnecessary matter which might happen to be led forth with the mould, and to pick and lay the pasture so clean as is possible; which done, it is to be intended, that yet notwithstanding this ground will lye exceeding rough, both in respect of the clots of earth, which will not easily be broken, as also in re-

spect of naturall roughness of these rich moulds, which at this time being digged up in the wet, will not easily be separated or dissolved, and therefore when you have finished the labours before said, you shall let the clots rest till the Sun and weather have dryed them, then after a ground showr (observing to take the first that falleth) you shall harrow your ground over, after this manner.

A new way of
Harrowing.

You shall cut down a pretty big white Thorn-tree, which we call the Hawthorn-tree, and make sure that it be wonderfull thick bushie and rough grown; which done, you shall plash it as flat as you can, and spread it as broad as you can, and those branches or boughes which of necessity you must cut in sunder, you shall again plash and thrust into the body of the Tree, binding them with cords or withs so fast thereto, that they may by no means scatter or shake out, and if any place appear hollow or thin, and cannot come to lie hard, firm, and rough upon the ground, then you shall take other rough bushes and thrust into the hollow places, and bind them from stirring also, till you have made your plash full and equall in all places, and that all the roughness may be as in a flat levell equally touch the grounds, when you have thus proportioned your Harrow, you shall then take great logges of wood, or pieces of timber, and with ropes bind them on the upper side of this rough Harrow, that the poise or weight of them may keep the rough side hard, and firm to the earth, and then the Harrow will carry this proportion or figure.

To



To the big end of this harrow, you shall fix a strong rope with a Swingle-tree with Treats, Coller, and Harness, and one Horse is fully sufficient to draw it round about the Pasture or Meadow: so with this Harrow you shall harrow the ground all over, and it will not cruelly break all the hard clots to a very fine dust, but also disperse them and drive them into the ground, and give such a comfort to the tender roots of the young grass, that newly springing, that it will double and treble the increase. And for mine own part, this experience I myself have seen upon an extream barren Pasture ground in *Middlesex*, where none of these good moulds or soyles could be got, but this Husbandman was fain to take all the rubbish and coorse earth even to the very sweepings of his yard, and for want of enough thereof, to take any ordinary earth he could get, and with it he dressed the ground in such sort as I have now last shewed you, and this being done in *April*, he had in *June* following as good Meadow as could be wisht for, and was the first Meadow I saw cut down in all that Country: from whence I

Of Rubbish
and sweepings.

draw this conclusion. That where these better moulds or soyls are not to be had, if yet not notwithstanding you take any ordinary mould or earth whatsoever, and with it replenish your Pasture or Meadow ground as is before shewed, that without doubt you shall find an infinite commodity, and profit thereby; for even the rule of Reason, and generall experience shews us, that any fresh or quick mould coming to the root of the Grass, when it is inspringing, must needs be an infinite comfort thereunto, and make it prosper, and shoot up with a double haste; and therefore I would have every Husbandman to make much of the rubbish, sweepings, parings, and spitlings of his house and yard, and also of shovellings up of the high-ways, back-lanes, and other such places; and especially if they be any thing clayie, or moorish, or sandy mixt with any other soyl; for of them he shall find great use, according to the Husbandry and experience already described.

Of Soap-ashes.

Lastly, There is not any thing that more enricheth Pasture or meadow ground then Soap-ashes, being thinly scattered and spread over the same; and this labour would ever be done at the latter end of *April*, for then Grass is beginning to shoot up, and at that time finding a comfort, the encrease will multiply exceedingly.

CHAP. XIV.

How to enrich and make the most barren soyl to bear excellent good Pasture or Meadow.

Two ways to enrich earth.

TO speak then of the bettering and enriching of these barren earths, and reducing them to good Pasture or Meadow, it is to be understood, that there are but two certain ways to compass and effect the same, namely, water or manure.

You are then, when you go about this profitable labour, to consider the situation of the earth you would convert to Pasture, and to elect for this purpose, the best of this worst earth you can find, and that which lyes lowest, or else that which is so descending, as that the bottom thereof may stretch to the lowest part of the continent, for the lower that such grounds lye, the sooner they are made good, and brought to profit: Next, you shall consider

sider what burthen of grasse it bears, and whether the grasse be cleane and intire of it self (which is the best and likeliest soyl to be made fruitfull) or else mixt with other worser growths, as Thistle, Heath, Broom, or such like, and if it be burthened with any of these naughty weeds, you shall first destroy them by stubbing them up by the roots, and by burning the upper swarth of the earth with dry straw mixt with the Weeds which you shall cut from the same, then it shall be good for certain nights, both before the first and latter spring, to fold your sheep upon this ground, and that not in a scant manner, but very plentiful, so as the dung of them may cover over all the earth, and their feet trampling upon the ground, may not only beat in the dung, but also beat off all the swarth from the earth, that where the Fold goeth, there little or no grasse may be perceived; then whilest the ground is soft, and thus trampled, you shall sow it all over with Hay-seeds, and then with your flat board beetles, beat the ground smooth and plain, which done, you shall then strow, or thinly cover the ground with the rotten straddles of Hay-slacks, and the moyst bottoms of Hay-barns, and, over that, you shall spread other strong manure, of which, House-dung, or Horse-dung, and mans ordure mixt together is the best, or for want of such, either the manure of Oxen, Kine, or other beasts; and this manure also you shall spread very thin upon the ground, and so let it lye till the Grasse come up through the same, which Grasse you shall by no means graze or feed with your Cattell, but being come to the perfectness of growth, you shall mow it down; and although it will be the first year but short and very coorse, yet it skilleth not; for the ensuing years shall it yield profit, and bring forth both so good grasse, and such plenty thereof as reasonably you can require; for this is but the first making of your ground, and alteration of the nature thereof: neither shall you thus dress your ground every year, but once in twenty or 40 years, having plenty of water to relieve it. When therefore you have thus at first onely prepared your ground by destroying the barren growth thereof, and by manuring, sowing, and dressing it, you shall then carefully search about the highest parts of the ground, and the highest parts of all other grounds, any way neighbouring round
about

Of watering
Grounds.

about it, and somewhat above the level thereof, to see if you can find any Springs in the same (as doubtless you cannot chuse but do, except the ground be of more then strange nature;) and the heads of all such springs as you shall find, you shall by gutters and channels draw into those ditches which shall compass your meadow round about, observing either to bring the water into that part of the meadow ditch which ever lyeth highest, and so let it have a currant passage through the ditches down to the lower part thereof, and so into some Lake, Brook, or other channell, and in this sort you may bring your water a mile or two: Nay, I have seen water brought for this purpose, three or four miles, and the gain thereof hath quit the charge in very plentiful manner.

Helps in the
Watering.

But if you cannot find any Spring at all, nor can have the help of any Lake, Brook, River, or other channell of moving water, (which is a doubt too curious, as being cast beyond the Moon) you shall then not onely cast ditches about this your Meadow ground, but also about all other grounds, which shall lye about, and that in such sort, that they all may have no passage but into the upper part of the meadow ditch; so that what rain soever shall fall from the Skie upon those earths, it shall be received into those ditches, and by them conveyed into the meadow ditch: and to augment the store of this water, you shall also in sundry parts of those upper grounds which are above the meadow in places most convenient, dig large Ponds or Pits, which both of them may breed, and also receive all such water as shall fall neer about them, and those Ponds or Pits being filled (as in the winter time necessarily they must needs be at every glut of rain) you shall presently by small drains, made for that purpose, let the water out from them into the ditches, and so into the meadow ditch, and so stopping all the drains again, make the Ponds or Pits capable to receive more water.

When and
how to water.

When you have thus made your ground rich with water, and that you see it flow (as in the winter time necessarily it must) in plentiful manner through all your ditches, you shall then twice or thrice in the year, or oftner, as you shall then think meet in the most convenient places of the meadow ditch,

stop

stop the same, and make the water to rise above his bounds, and to over-flow and cover your meadow ground all over, and if it be a flat level ground, if you let the water thus covering it to lye upon the same the space of four or five dayes, or a week, it shall not be amiss; and then you may water it the seldomer. But if it lye against the side of a hill, so that the water cannot rest upon the same, then you shall wash it all over, leaving no part unmoystened; and this you shall do the oftner, according as the water shall fall out, and your water grow more or less plentifull.

Now for the best season or time of the year for this watering of meadows, you shall understand, that from *Alhallowtide*, which is the beginning of *November* (and at which time all after-growth of meadows are fully eaten, and cattel for the most part are taken up into the house) untill the end of *April* (at the which time grass beginneth to spring and arise from the ground) you may water all your meadows at your pleasure without danger, if you have water enough at your pleasure, and may spend or spare at your will; yet to do in the best perfection, and whereby your ground may receive the greatest benefit; you shall understand, that the onely time for the watering of your meadows, is, immediately after any great Flux of rain, falling in the Winter, any time before *May*, when the water is most muddy, foul, and troubled, for then it carrieth with it a soyl or compost, which being left upon the ground, wonderfully enricheth it, and makes it fruitfull beyond expectation, as daily is seen in those hard Countries, where almost no grass grows but by this industry: And here you must observe, that as you thus water one ground, so you may water many, having ever respect to begin with the highest, and so let the water pass out of one ground into another, untill it come to the lowest, which commonly is ever the most flat and level, and there you may let the water remain so long as you think good (as was before shewed) and then let it out into other wast ditches or rivers. And here you shall know, that this lowest ground will ever be the most fruitfull, as well because it lyeth the warmest, moystest, and safest from storms and tempests, and also because what soyl or other goodnes this over-flow of water, or the rain, washeth from other grounds, it

The best season for watering.

leaveth

leaveth upon this, and so daily increaseth the fertility, from whence you shall gather, that at the first making of these meadow grounds, you may bestow less cost of manure and other charges upon this lowest, flat, level ground, than on the higher: and so by that rule also, observe to bestow on the highest ground, and the highest part of the highest ground ever the greatest abundance of manure, and so as you shall descend lower and lower, to lay your manure thinner and thinner, yet not any part utterly unfurnished and void of compost; yet, as before I said, you are to remember, that these meadow grounds need not thus much use of manure (having this benefit of water, and the first years dressing as was shewed in the beginning of this Chapter) above once in twenty years; nay, it may be, not above once in a mans life time.

And here also is to be considered, that the water which cometh from Clay or Marl grounds, being thick, muddy, and puddy, is much better and richer than that which cometh from sand, gravel, or pibble, and so runneth clear and smooth, for that rather doth wash away and consume the goodness of the ground, than any way add strength thereunto.

CHAP. XV.

Of the enriching and dressing of Barren grounds, for the use of Hemp or Flax.

Grounds ill
for Hemp or
Flax.

YOU shall understand, that there are two sorts of grounds, which out of their own natures utterly refuse to bear Hemp or Flax; that is, the rich stiff black Clay, of tough solid and fast mould, whose extreame fertility and fatness giveth such a surcharge to the increase of the seed, that either with the rankness it runneth all into Bun and no rind; or else the seed being tender, and the mould sad and heavy, it burieth it so deep therein, that it can by no means get out of the same: The other is the most vile and extreme barren ground, which by reason of the climate wherein it lyes, is so exceeding sterile and unfruitfull, that it will neither bear these seeds, nor any other good seed. And of these two soyls only I purpose in this place to treat; for which, such soyls as will naturally & commodiously bear these seeds, I have nothing to do, in that I have sufficiently

ticiently written of them in mine *English Husbandman*, and *English Housewife*, which are books onely for good grounds, but this for all such grounds as are utterly held without cure.

To begin then with the stiff black Clay, which albeit it be very rich for Corn, is most poor for these seeds, when you would reduce and bring it to bear Hemp or Flax, which neer unto the Sea-coast is of greater price and commodity than Corn any way can be, especially adjoyning unto any place of fishing, in respect of Nets and other Engines which is to be made of the same, and which being daily wasted and consumed, must likewise be daily replenished; you must first with a strong plough, fit for the nature of such land, plow up so much ground as you intend to sow Hemp or Flax upon, about the midst of May, if the weather be seasonable, and the ground not too hard: if otherwise, you must stay till a shower do fall, and that the earth be moistned, then shall you hack it and break the clots in small pieces; then with the salt Sea-sand, you shall sand it very plentifully; but if that be not to be gotten, and that you be very well assured of the natural richness of the earth, you shall then sand it with the best Red sand you can get or find neer unto you, and upon every Acre of ground you thus sand with fresh sand, you shall sow three bushels of Bay-salt, and then plow up again the earth, sand and salt together, which would be done about the latter end of the year, as after *Michaelmas*, and so let the ground rest till seed-time, at which time you shall first before you plough it, go down to the low rocks on which the Sea bears, and from thence with drags and other Engines, gather those broad leaved black weeds, which are called *Orewood*, and grow in great tufts, and abundance about the shore; and these weeds you shall bring to your Hemp-land, and cover it all over with the same, and then you shall plow it again, burying the weeds within the earth.

And herein is to be observed, that in any wise you must lay these weeds as wet upon the Land as when you bring them out of the Sea, provided still, that you add no other wet unto them but the salt-water, for so they are, of all soyls and manures whatsoever the onely best and fruitfullest, and most especial for these seeds; and breed an increase beyond expectation.

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When

Black Clay for
Hemp, &c.

in to garden
used dries
218

When you have thus plowed over the ground, you shall then hack it again, and then sow it with either Hemp or Flaxseed, which you please, and after it is sown, you shall then harrow it (and not before) and you shall be carefull to harrow it into as fine mould as you can, and this mould is likely to run fine enough, as well by reason of the fertility, as also of the mixture; yet what clots you cannot break with your Harrows, those you shall break with your clotting-beetle, and such like tools; then after the first great shower which shall fall after your sowing, you shall run over your land thus sown with your back Harrows, that is, with a pair of large Harrows, the wrong side turned upward, to wit, the teeth turned from the earth, and the back towards the earth; and if need be, you shall lay upon the Harrows some indifferent heavy piece of wood, which may keep the back of the Harrows closer to the ground, and so go over all the earth, and lay it as smooth and light as is possible, without leaving the smallest clot that may be unbroken. Now if the ground be sown with Hemp, you shall not think of weeding it at all, because Hemp is so swift a grower, and such a poyson unto all weeds, that it over-runneeth, choaketh, and destroyeth them; but if it be sown with Flax or Line, which is a much tenderer seed; and bringeth forth more tender leaves and branches, then you shall watch what weeds you see spring up, and in their first growth pluck them up and cast them away, till you behold your Flax or Line to be grown above the weeds, and then you may let it alone also, for after it hath once gotten height, it will not be over-grown with weeds.

Making of ill
earth bear,
&c.

Now touching the other soyl, which through the extreame barrenness thereof, refusing to bring forth any good fruit at all, you shall in all points dress it, as you dress your plain clayes, described in the second Chapter of this Book, beginning at the same time of the year that is then appointed, or (if more necessary occasions hold you) if you begin later, it shall not be amiss, and then at *Michaelmas* you shall plow it over the second time, and manure it with sea-weeds, and so let it lye at rest till *Mareh* (which is seed time) and then plow it again, and manure it with sea-weeds again, and after the plowing, you shall hack.

hack it, and if in the hacking you find the earth stiff and tough then you shall harrow it before you sow it, and harrow it again, breaking the earth so small, and laying it so smooth as possible you can, using the help both of the clotting beetles, and all other tools which may be available for breaking the earth and making the mould as fine as any ashes; then after the first great showr of rain, perceiving the ground to be well moistned, you shall instead of the back Harrows (which upon this earth may be too light) take the great rowler which is described in the book of the *English Husbandman*, being a great round piece of timber of many squares, drawn either by Horse or Oxen, but a single Horse is best, both in respect of much treading the ground, as also for the swift going away or drawing of the same: for the swifter it is drawn, the better it breaketh the ground, and the lighter it leaveth the mould: and with this rouler, you shall run over and smooth your ground very well, leaving no clot unbroken, and so let it rest.

As for the weeding of this ground, you shall not respect it at all, for naturally it will put up no weed, the very ground of it self being a very great enemy thereunto, nor shall you need to dress this ground in the form before said, but once in eight or ten years: only every seed time, when you plow it (as you shall not need to plow it at any time, but seed time only) you shall before the plowing, cover or manure the Land with the sea-weed before spoken of, which will give strength enough to the ground, without any other assistance.

Weeding.

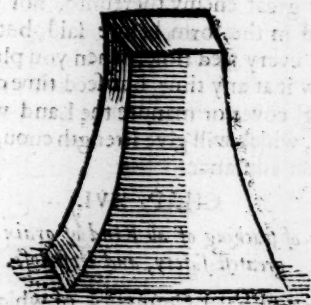
CHAP. XVI.

The manner of stacking of all Kind of grain or pulse with greatest safety, and least loss.

IN these barren and hard Countries, of which I have formerly written, all sorts of buildings are exceeding costly and scarce, both in respect of the clime, which is commonly most extreme cold, mountainous, and much subject to storm and tempest, as also through the great want of Wood and Timber, which in those hard soyls doth hardly or never prosper, and therefore in such places buildings must be both small and dear, so that it will be very hard for the Husbandman to have house-room for

all his corn; but that of necessity he must be enforced to stack much, or the most part of his Corn without doors, which albeit it be a thing very usuall in this Kingdome, yet is it in many places so insufficiently done, that the loss which redounds thereby (partly by the moyflure of the ground, which commonly doth rot and spoyle at least a yard thickness of the bottom of the Stack next the ground; and partly through Mice, Rats, and other Vermine, which breeding in the Stack, do eat and devour a great part thereof, as also through many such like negligent causes) is greater than a Husband may with his credit be guilty of, or a profitable Husband will by any means suffer to be lost so negligent.

To shew then the manner how to stack or mow your Corn without doores, in such sort, as neither the ground shall rot it, nor these vermines destroy it, nor any other loss come to it by way of ill Husbandry, you shall first cause four pieces of timber, or four stones, to be hewed broad and round at the neither ends, like the fashion of a Sugar-loaf, or this figure.

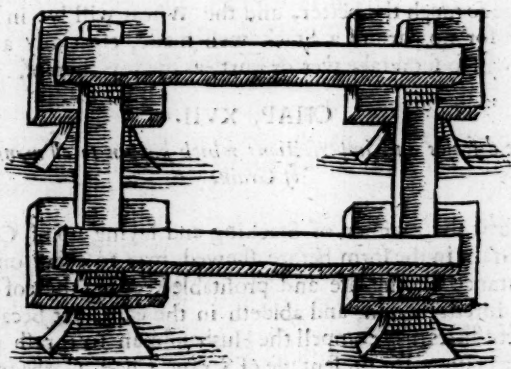


And these pieces of wood or stone shall be in length three-foot or thereabout, and in compass or breadth at the bottom, two foot, or a foot and a half, and at the top not above one foot: these four pieces of wood or stone you shall place in your stack-yard, or other convenient place near your thrashing-floor,

floor, and you shall place them four square, of an equal distance one from another: then you shall cut out four smooth boards of two inches and a half thick at the least, and full three foot square every way, and these boards you shall lay upon the heads or narrow tops of these stones or pieces or timber according to this Figure.



Then shall you take strong over layes of wood, and lay them four square from one board to another, according to this Figure.



And

And then upon these over-layers you shall lay other smaller poles close one by another, and then upon them you shall mow or stack your Corn, whether it be Wheat, Barley, Oats, Pease, or any other kind of grain, and be sure if you make your stack handsome and upright, which consisteth in the Art and Workmanship of the Workman, you shall never receive loss in your Corn: for the raising of it thus two or three foot from the ground, will preserve it from all moisture or hurt thereof, and the broad boards which cover the four ground-posts will not suffer any Mice or other vermine to ascend or come into the same.

Now for the manner of laying your Corn into the Stack, you shall be sure to turn the part of the sheaf where the ears of the Corn lye ever inward into the Stack, and the other which is the straw end, you shall ever turn outward, and by that means you shall be assured that no flying Fowl, as Pigeons, Crows, and such like, can do you any hurt or annoyance upon the same: Lastly, you shall understand, that you may make these Stacks either round, square, or long-wise, yet round is the safest, and if you do make them long-wise, then you shall set them upon six ground-posts, or eight, according to the length and proportion you would have it, and after your Stack is made, you shall then thatch it very well to keep out the wet; also if when you do Stack your Wheat, you do top your Stack with Oats or other coarse grain, it will be so much the better, and the Wheat will lye in greater safety: for no part of a Stack well made, especially a round Stack, will so soon take wet or hurt, as the top thereof.

CHAP. XVII.

The diseases and imperfections which happen to all manner of Grain.

ALbeit the manner of Stacking and laying up of Corn or Grain in the form before shewed, may to every one give an assurance for the safe and profitable keeping thereof as long as it endureth therein; and abideth in the ear, yet because divers necessities may compell the Husbandman to thrash out his Corn, as either, for present use of Straw, Chaff, Garbage, or other

other commodities needfull unto him (as the season of the year shall fall out) I think it most necessary in this place, to shew how all manner of Grain and Pulse, of what nature soever, may most safely and profitably be kept from all manner of annoyances, or corruptions whatsoever, being a work of that utility and goodness, that not any belonging to the Husbandman doth exceed it: Nor shall it be sufficient to shew the offences and diseases of Grain with their cures and healthful preservations, whilst it is in the Husbandmans possession, but also whilst it is in the earth, and at the mercy of cold, heat, moistness, or dryness, and not onely subject to the malignant influences of Stars and Planets, with the encreasing and decreasing of the Moon and her operations: but also of divers other hurtfull Vermin, as birds, worms, pismires, dorrs, snails, moals, and other such like: some whereof consume and devour the grain ere it sprout, other sprouting when the kernel is rotten, and turned to sweet substance, and others after it is sprouted, by devouring the first tender leaves, before they have any strength to appear above earth, being as it were but soft white threads not changed into the strength of green, because the air and Sun hath not yet lookt upon it.

To begin then with the first enemies of corn or grain, after it is thrown into the earth, there is none more noysome then *Crows*, *Pidgeons*, and *Birds*, *Crows*, and *Choughes*, and other smaller birds, which flocking after the seeds-man will in a manner devour and gather up the grain as fast as it is sown: for as according to the old saying, *That many hands make light work*, so many of their mouths (being creatures that ever flye in flocks together) and their much nimbleness in devouring, soon rob the earth of her store, and deprive the labouring Husbandman of very much profit; and the Grain which the creatures do most consume, is all manner of white Corn, as Wheat of all kinds, Rye and Oats, as also Hemp-seed, Lin-seed, Rape-seed, and such like: Neither are they only offensive during this time of sowing, but after it is sown and covered, digging it with their strong bills out of the earth, and so making the waste greater and greater.

The prevention or cure of this evil, is divers, as the affections of people, and custom of Countries do instruct them: for some

The Cure.

some (especially the *French-men*) use when they sow these grains and seeds, first to sprinkle it with the dregs or lees of their bitterest oyles, which when these devouring fowls do taste, they refuse to do any further hurt: Others use to sow Pigeons dung or Lime with their seed, which sticking unto the grain, the unfavorableness thereof will make the fowl cast up the grain again, and leave to do further hurt. But forasmuch as these medicines cannot ever be had, nor are ever wholesome for every ground, the onely best and safest means to prevent this evil, is, to have ever some young boy, with bow and arrows to follow the seed-man and Harrows, making a great noise and acclamation, and shooting his Arrows where he shall see these devourers light, not ceasing, but chasing them from the Land, and not suffering them at any time to light upon the same, and these servants are called Field-keepers, or Crow-keepers, being of no less use and profit (for the time) then any other servants whatsoever. Nor is it sufficient to have the Field-keepers for the bare time of seed only, whilst the grain is in sowing, but he shall also maintain them untill such time as you see the grain appear above the earth, which for Wheat or Rye, because they are winter seeds, and so longer in sprouting, will ask a full month; for all other seeds which are sown in the Spring, or Summer, a fortnight is full sufficient: And this Field keeper shall not fail to be in the field an hour before Sun in the morning, and so continue till half an hour after Sun-set in the evening, for at the rising and setting of the Sun is ever done the greatest mischief, for then are all creatures most eager and hungry, and though the indurance may promise much pain and trouble, yet unquestionless the labour to any free spirit, is both easie, and pleasant.

Additions.

Also if your Field-keeper, instead of his bow and arrows, do use to shoot off a musket, or Harquebush, the report thereof will appear more terrible to these enemies of Corn, and the profit thereof will be a great deal more: for a shot or two of powder will save more Corn, than a weeks whooping and shouting, onely you must observe, that your Field-keeper use no bullet or half-shot, for so he may turn scaring to killing. Now touching the destruction which these creatures make of Corn after it

is stackt up by tearing off the thatch, and digging holes and pits therein; to prevent that, you shall cause the thatcher to scatter upon the thatch, great store of ashes of any kind, or else Lime, that as the Pidgeons or Crows tear up the straw, the Lime or ashes will sparkle into their eyes and nares, which they will not indure; as for those parts of the stack which cannot be thatcht, as the sides and ends; upon them you shall prick divers scare-crows, as dead Crows, or dead Pidgeons, or any other rags, as the shape of a man, made either of thumb-ropes of hay or straw, or else some old cast-away apparel, stopt with straw, & so fixed on the stack; also in this case you may use Clap-mills, or such-like toys, which make a great noise. But to conclude, the best prevention for these Creatures (if you want ability to maintain a field-keeper) is to take long lines of pack-thread, and in them to knit divers feathers of divers colours, especially white ones, and with little stakes so fasten them over the Corn, that with every breath of wind the feathers may dance and turn about, and the nearer that these blinks or scares come to the ground (when the Corn is new sown) so much the better it is; least the fowl finding a way to creep under them, begin not to respect them so that a hand or two from the ground is sufficient; Provided that the feathers and scares have liberty to play and move.

But if it be to save Corn in ripening, that is to say, a litle before it be reapt, when the ears begin to harden, or when it lieth in single sheaf upon the Land, for then fowl and birds do as great mischief, as at any other season, it shall then be fit that you raise these lines or scares upon higher stakes, so as they may play as much above the ears of Corn, as before they did above the earth; and amongst these scares thus made upon lines in sundry parts of the field, you shall upon other stakes place many other bigger scares, as dead Crows, Pies, Glead, Pigeons, or such like, as also the proportion of a man formerly shewed you, or any rags of cloath being black, fowl, and ugly, like Bakers mal-kins; and than this, there is no safer way for the defence of Grain or Corn from these Birds, and such like.

The next great devourers or consumers of grain are Pismires Of Pismires. or Ants, which although it be but a little Creature, yet it is so labourfome, that the grain which they carry away or destroy by eating amounteth to a great quantity, and the mischief which

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these

these little vermine do, after the Corn is covered in the ground, and before it sprout, for they creeping in at the little chinks of the earth, and finding the Corn, either drag it out, or eat it, so that it cannot grow, and the grain which they most hurt, is all manner of white Corn, especially your finest and smallest Wheat, for the skin or hull is thinnest, and the kernel whitest and sweetest; also to barley they do much hurt, especially that which is fullest and best, likewise to Rye, Hemp-seed, Lin-seed, and Rape-seed; as for Oats, because it is double hull'd, and also your great whole straw wheat, and polard wheat, which is thick hull'd, their hurt is not so much to them, and unto pulse nothing at all, because they are too heavy, too thick skinned, and bitter in taste.

The Cure.

The best cure and prevention for these Pismires, is, to search your Corn-fields well, especially under hedges and old trees, and on the top of Mole-hills, and if you find any beds or hills of Ants or Pismires, presently after Sun-setting, with hot scalding water to drown the beds or hills, or with wet straw and fire, to make such a smok upon them, as may smother them to death: also if you manure your Corn-lands with ashes, lime, or salt-sand, you shall be well assured it will never breed Pismires.

Of Dore.

Next unto these, your Dore, or great black Clocks are vehement destroyers of all kind of Corn, both white Corn and Pulse, whilst it lieth dry on the earth, and before it sprout; for after it begunned to sprout, they do no more touch it, and these Dore destroy it in the same manner, as the Pismires do, by creeping in at the small crevices of the earth, and finding the grain, do as long as it is dry, feed thereon; and though they are no hoarders, or gatherers together of the grain, keeping it in heaps in dry places, as the Pismires and other vermine do, yet they are great feeders thereon, and that continually: besides, they will ever chuse out the fullest and best Corn, and leave the leaner, whereby they do the Husbandman double injury, as first to devour, and then to devour but the best only.

The Cure.

The cure or prevention for these Dore, or black Clocks, is, in Seed-time to make great smoaks in your Corn-fields, which will presently chase them from thence, for they are the greatest enemies that may be to all manner of smok; but if that be not sufficient,

sufficient, then immediately before you sowe your Corn, you shall very lightly sowe your Land with sharp Lime, and whensoever the Dore shall find the smell, or taste thereof, presently he will depart; or if he eatth of the grain that toucheth the Lime, it is a present Poyson unto him, and there he dieth.

After these, your field Rats and Mice are very vehement destroyers of all manner of grain or Seeds before they sprout, especially all sorts of wheat, and all sorts of pulse, because for the most part those kind of grains in many Soyle are sown under furrows, and not harrowed, so that the furrows at first lying a little hollow, these Vermines getting in between the earth and them, will not only devour and eat a great part of the grain, but also gather together great heaps thereof into their nests, as is often seen when at any time their nests are found, some having more, some less, according to their labours.

And albeit in other Soils where the grain is sown above surface, and so harrowed in, and laid much more close and safe, they cannot do so much hurt as in the former, yet even with these they will with their feet dig out the Corn in great abundance, and though in less measure, yet do hurt that is unsufferable, so that to conclude, neither Rye, Barley, Oats, nor any other smaller and more tender Seeds, are free from their annoyance and destruction.

Now the Cure and prevention for these Field Rats, or Mice, are divers, according to the opinions of divers Authors, and divers of our best experienced Husbandmen: for some use in the Dog-days, or Canicular days, when the Fields are commonly bare, to search out the holes and nests of these Rats and Mice, which are easily known, being little round holes in the earth, made so round and artificially as if they were made with an Auger, no bigger than the body of the Creature that was to lie in it, and into these holes they use to put a few Hemlock-seeds, of which when the beasts tastes it is present death unto them: Others use to sprinkle upon the land Heliotrop, or netting powder mixed with Barley-meal, of which the Mice and Rats will greedily feed; and it is a deadly bane and present death unto them.

Lastly, & which is the best Medicine if you take a good quantity of ordinary green glass, beaten also to powder, and as much

Of field Rats and Mice.

The Cure.

Copperas or Vitriol beaten also to powder, and mix them with course honey, till it come to a paste, and then lay it in the holes, and most suspicious places, and it will neither leave Rat nor Mouſe about all your fields, but suddenly destroy them.

Of Worms.

and how to

destroy them

The next great destroyers of Corn and Grain, are Worms, and they destroy it in the sprouting, then when the ground hath rotted it, and the white or milk substance breaking open the upper husk, shooteth forth in little white threds at both ends, upon which whilst it is so moist and tender, the worm feedeth extreme, and so devouring up the substance or sperm, is the cause the corn cannot grow or get out of the ground, and these worms being as it were the main citizens within the earth, are so innumerable, that the loss which is bred by them is infinite.

The Cure.

Now the cure or prevention for these Worms, is diversly taken; for some Husbandmen use but only to strike into the Plow, Rest, and under the lowest edge, of the Shebord certain crooked spikes of Iron of great nails half driven in, and turned back again, with which as the Plow runs tearing in the ground, and turns up the furrow, those pieces of Iron kill and tear in pieces such Worms as are either within or under the furrow that the Plow casts up, and this is sure a very good Husbandry Practice, but not sufficient for the destroying of such a secret hurtful vermine which is so innumerable, and lieth so much concealed; therefore more curious Husbonds use besides this help of the Plow, to take Oxe-dung and mix it with straw, and then to burn it up in the land making a great smoke over all the land, immediately before you plow it for Seed, and it is thought that this will kill all the worms which lie so high in the earth, as to hurt the Corn.

Others use before they make either the mixture or the smoke, to wet the straw in strong lye, and then adding it to the dung, the smoke will be so much the stronger, and the Worms kill'd the sooner; or if you sprinkle strong Lye upon your Seed, before you sowe it, there is not any Worm that will touch the grain after. Also if you take hemp and boil it in water, and with the water sprinkle your seed before you sowe it, not any Worm will come near to touch it.

Of Rye not to be wet.

Yet it is to be observed in this rule of wetting your seed corn, that

that by no means you must wet your Seed-Rye, for it is a Grain so warm and tender, that it will neither indure cold, wet, nor stiff ground, in so much that the Plow-man hath a Proverb, that Rye well drown'd in the Hopper; that is to say, it must neither be sown on wet ground, nor in a wet day, since present showers are apt to destroy.

Lastly, it is thought that oft plowing your ground in the wane of the Moon is a very good means to destroy both.

Touching that practice which many use, to gather the worms from their lands at Sun-rise, in bright dewy morning, and Sun-set, when the worms couple above the earth, I hold it more fit for small Gardens, than large Corn-fields.

The next great destroyers of Corn, are Snails, and they destroy it after it is sprouted, feeding upon the tender white threads and fions which start from the Seed and would rise above the earth, being the stem or stalk on which the ears should grow (were it not devoured and eaten up by the Snails, and such like Vermine) as soon as it begins to peep up, or as it were to open the earth; whereby it is driven back and forced to die in the earth: for these creatures sucking up the tender sweetness, deprive it both of life and nourishment.

The Cure and prevention for this evil, is to take the soot of a Chimney, and after your Corn hath been sown a week or ten days, or within two or three days after the first shower of Rain which shall fall after the Corn is sown; you shall sowe this soot of the Chimney thinly over the Land, and not a Snail will indure to come thercon: Others use (especially in France and those more fertile Countries) to take common Oyl-lees, and after the Corn hath been sown, and is ready to appear above the ground, to sprinkle it all over the Lands, by which means no Snail or such like Creature will indure to come near the same.

The next great destroyer of Corn is accounted the Grasshopper, and he also destroyeth it after it is sprouted, and appeareth above ground as the Snail doth, but somewhat more greedily, for he not only feedeth on the tender white strings, but upon the first green leaves that appear also; by which means the Corn is not able to spring or bring forth a stem or stalk to bear the

the ear upon, or if it do put forth any, yet it is so small, weak and wretched, that the ear growing on the same, is withered and lean, and the grain dry and blasted, and no better than chaff; nor is there any Corn that escapeth the destruction of the Grasshopper, he generally feedeth on all; first on Wheat and Rye, because they are the earliest, then on Barly and Oats, and lastly on pulse; upon whole leaf and blossom he feedeth, whilst the first is sweet and pleasant, or the other green.

The Cure.

Now the Cure or prevention for these Creatures, is, according to the opinion of some Husbandmen, to take Worm-wood, and boyl it well in water, till the strength of the Worm-wood be gone thereinto, and then wet with that water in the month of May, to sprinkle all your Corn over when the Sun is rising or setting, and not any Grasshopper will come near, or annoy the same. Others use instead of Worm-wood to boyl Centaury, and to use the water thereof in the same manner as aforesaid, and find an equal profit in the same: but it is most certain, that any bitter concoction whatsoever, used and applied as aforesaid, will not leave any Grasshopper about your field; for any bitterness is such an enemy unto them, that they cannot live where they feel any taste thereof.

Of Moles.

The last offence of living Creatures belonging to Corn or Grain are Moles, which not only feed upon it after it is sprouted, and spindled; by eating up the roots thereof, and so consequently by killing the whole Corn; but also their digging and underturning of the earth, do root up the Corn and destroy it in most wonderful manner, for where they make their haunts, or are suffered to dig, there they will destroy almost half an acre in a day: neither make they choice either of grounds or grain, for all grounds and grains are alike, if the ground be not too wet or subject to Inundations, or over-flows (as for the most part Corn grounds are not) for above all things Moles cannot indure wet ground, or earth of too moist a quality.

The Cure.

Now the best Cure or prevention against these Creatures, is, to find out the trenches and passages, which are most plain & easie to be known by the turning up of the new earth, and digging cross holes in the same, to watch either the going forth, or the coming back of the Mole, and when you see her, cast to strike her

her with an iron fork made of many grains, as eight or six at the least, and so to kill and destroy them, which is so generally known amongst Husbandmen, that it is become a trade and occupation among them, so that it needs no farther description; and the rather, in as much as for three or four pence a score, you may have any ground cleansed of Moles whatsoever.

Now there be some others which have not this art of killing or catching of Moles, which only do take brimstone and wet stinking straw, or any thing else that will make a stinking smoak, and putting fire thereto, smoak all the places of their haunts, and by that means drive them all clean away from the corn lands: many other practises they have, but none so good, certain, and probable as these already declared.

Thus far I have spoken of those offences which proceed from living Creatures, I will not treat of those which come and grow from the influence of the Heavens, being malignant vapours, which striking into the earth, do alter the sweet and pleasant nourishment thereof, and change it into bitterness and rottenness, whereby the Corn is either slain outright, withered and made lean and unkindly, or else the kernel turns to a filthy blackness, being bitter, dry and dusty, like unto smoak, which the Husbandmen call smuttiness, or mildew. It cometh also another way, as namely, by over-rankness, or too much fitness of the earth, and this hapneth most commonly only to Wheat, for if blackness happen to any other grain, it cometh of blittings, or other malice of the Stars, for rankness of the ground is in Barley, Rye, or Oats only, make them lie flat to the ground, the stalk not being able to support the multiplicity of the ears, and so by that means the grain wanting his true nourishment, grows withered, and of no validity; now that this is most easie to be found out, the rankness of the growing Corn rising as it were in close bundles together, and the deep blackness of the green blade will with small travel shew you.

This to cure and prevent, it shall be good before you sow your grain, to sow your land lightly over with Chalk, for that will abate his over-rankness.

There be other malignant qualities which proceed from the influences of the Heavens, or rather from the qualities of the Planets:

Offences from
the influence
of the Heaven.

Of Smuttiness
and Mildew.

The Cure.

Additions.

Planets:

Planets or Elements, which do many dangerous hurts unto Corn, as namely the Hail, the Lightning, the Thunder, or the Planet-struck, or Blasting, for all which the antient Husbandmen have suggested several Cures : as namely for the Hail, to plant the White-Ane, or stick the branches thereof in the Corn-field: for the Lightning, to close a Hedge-Toad in an earthen Pot, and burying her in the Corn-field, or to plant or hang up the feathers of an Eagle, or a Seal-skin, or to set Lawrel therein; for the Thunder, to Ring Bells, to shoot off great Ordnance, or to burn stinking weeds in the Corn-field : And for Blasting, to take the fair horn of an Oxe, and mixing it with dung, to burn it in the Corn-field, or to take the Branches of the Bay-tree, and to plant them in the Corn-field : But, in as much as all these, and many other the like, smell rather of Conjuraton, Charm, or Exorcism, then of any probability of truth ; I will nelther here stand much upon them, nor perswade any man to give further credit unto them, than as to the vapours of mens brains, which do produce much, many times out of meer imagination ; and so I will proceed unto those things which are of far greater likelihood.

Of Frosts.

The next evil which hapneth unto Corn or Grain, is that which cometh by frost and sharp-nipping colds, which starving the Root, and binding up all nourishment, maketh the Corn dry, wither, and never prosper; and, than the violence of the frosts, there is nothing more bitter to Plants and Seeds; for, even Rafter-like, it cutteth the veins and sinews in pieces, and as sharp needles pricketh the heart of every growing thing: For as the fire which is most hot, when it rageth, burneth, and consumeth all things; so the frost, which is most cold when it continueth, starveth and choaketh, or stiflith whatsoever it embraceth.

The Cure.

Now the Cure or prevention for those evils which do happen to grain by these great frosts, is as some Husbandmen suppose, to cover the Land over when it is sown with ashes; others spread straw or rotten litter upon their Corn, and not any of them but is sufficient to prevent the worst injury that frost can do.

Mists and Fogs.

The most malignant quality which offendeth grain, is mist
and

and fog; which being naughty vapours drawn from the infected parts of the earth, and fall upon the Corn, do not only make the grain leprous, but also infecting the better earth after the kindly nourishment thereof, and as it were distilling corruption in the veins, makes all that depends thereupon most leprous and unwholsom, and thereupon altereth the quality, quite turning sweetness into bitterness, fulness into emptiness, and goodness into badness, to the great loss of the Husbandmen, and the much disreputation of the ground.

Now the Cure and prevention of this evil, according to the opinion of all the best Husbandmen, is, to take weeds green, the twigs of bramble, and other brush woods, wet straw, or such like stuff, and binding them up in great bundles, to put fire thereto, making a great and violent smoke, and then taking the advantage of the wind, to walk up and down the field and smoke it, which is thought a certain remedy to take away those inconveniencies which happen by the venome and poyson of these mists and fogs. The Cure.

Now to conclude, of the diseases and infirmities which happen to Corn whilst it is in the field, there is not any formerly spoken of more dangerous, or of vilder quality than the reaping, mowing, or gathering in of Corn wet, or too green, and unhardned; for such moisture, when the Corn is sheaved up close together, or stackt or mowed up, forthwith gathereth heat, and either setteth the Corn on fire, or else the moisture being of less quantity, and not apt to flame, yet it corrupteth the grain and straw, and breedeth a stinking mouldiness or rottenness about it: so that the Grain either becomes dung or dirt, or at least so stinking and unsavory, that it is good for no use or purpose, as is daily seen where careless Husbands gather in their Grain without respect or Government, making the old Proverb, *That haste ever brings waste.* Corn reapt wet.

The Cure and prevention of this evil, is the well-husbanding and managing of the Harvelt, as first with a careful and well-judging eye to look upon your Corn, and to know by the hanging downward of the ear, looking as it were back to the ground, and by the hardness of the Grain, whether it be ripe or no; then looking to the cleanness of the Corn, as whether it

be full of greenness, as grass, weeds, and such like : or clean of it self without any mixture : if you find there be any weeds mixt with it, then you may reap it so much the sooner, though the kernel be not so well hardned as you would wish : and above all things, have a care never to shear Corn in the rain or wet, no, not so much as with the mornings or evenings dew upon it, but even in the heat and brightness of the day. Then having reapt your Corn so full of grass and weeds, you shall by no means sheaf it, but spreading it thin in the Sun, let the grass wither all that day, which when you perceive to change colour and grow dry, then bind it up in sheaves, and let it lie single a day, that the wind and Sun may get into it, and dry the greens more sufficiently ; then lay it in shocks of six or eight sheaves apiece, and in those shocks, turn the ears so inward, that the other bigger ends may defend them from all the rain, wet or dew that may fall upon them : then a day or two after, lay them in shocks of twenty, or four and twenty sheaves apiece, and in those shocks, let them take a sweat : then break them open in a bright Sun-shine day, and letting the air pass thorow them, to dry them, forthwith lead the grain home, and house it or stack it in such sort as was shewed in the former Chapter, and be sure the grain thus ordered and dried can never take hurt : but if the season of the year fall out so extraordinary evil and full of wet, that by no means you can get your Corn dry home, (which although it be seldome seen, yet it is possible to be seen) in this case you must bring it home as well as you can, and having your Kilne well ordered and bedded, you shall lay as many sheaves thereon, as it can contain, and turning and tossing them over a very gentle fire, by slow degrees, dry them very perfectly as near as you can, with no greater a heat than that which the Sun giveth, and then mow and stack them up at your pleasure, for the air will sweeten them again, and take away all smell or smoke or other annoyance ; only observe, not to stack them up whilst the fire or heat is in them, but when they are cold, and so they will be as sweet as may be.

Now it is not amiss that I speak here a word or two of

washt Corn, or the washing of Corn: True it is (as before I have written) that all sorts of Wheat whatsoever are subject either by the rankness of the ground, blasting or else mildewing, to a kind of filthy sooty blackness, as is already shewed; and this sooty Corn is taken two ways, generally and particularly: generally, if the whole Land be stricken; and no Corn saved, but all spoiled, which is called mildewed; or particularly, where but some certain ears are struck, or some certain part of the grain, as when it is black at both ends, yet full and sound in the midst, and this is called smutcht Corn, being disfigured in part, but not in all. This smutcht Corn, which is stricken here and there, if the blasted ears be not culled out from the other, which to do is an Husbandry exceeding good and very worthy) when it cometh under the flayl, the dust of those black blasted ears will so foul all the rest of the Corn, that it will look black and ill-favoured, and so become unserviceable and unmarketable; for the blasted Corn is both bitter and unwholesome: In this case, you must of force wash this Corn, and you must do it in two or three waters, till you see all the blackness quite gone; which done, then drain away your water clean, and laying the Corn on fair window cloaths, or coverlids, lay it in the heat of the Sun, and so dry it again till it be so hard that it will grind: But if the time of the year will not serve for the Sun's drying it, then you shall dry it on a Kiln, with a very soft and gentle fire, and then cool it in the air to recover the sweetness again, and then the Corn is as serviceable as any other: only for Seed it will by no means serve, both by means of the blasting, which makes the kernel imperfect at both ends where it should sprout, as also the too much drying thereof, by which it is so much hardened: that the ground hath no strength to resolve it; therefore it is the Office of every Husbandman when he chooseth his Seed-Corn, to eschew by all means this washt Corn as a Grain that is lost in the earth, and will by no means grow.

Therefore that you may know washt Corn from all other Corn, and so not to be cozened by any deceit in the ill Husbandman, you shall take it up in your hand, and if the Corn

To know
washt Corn.

look bright, clear, and shining, being all of one intire colour, without change or difference, then be sure the Corn is unwasht and perfect.

But if you find it look whiter at the ends than in any other part of the Corn, and that the whiteness is black and not shining, so that there is a changeable colour in the Corn, then be assured that the Corn is washt, and then by no means apt for Seed or increase.

Again, put three or four grains into your mouth, and chew them, and then if the taste be sweet and pleasant, and grind mellow and gently between your teeth, then is the Corn not washt; but if it have a bitterish, or fleshy raw taste, and grind hard between your teeth with much roughness, then hath the Corn been washt, and dried again; and is not good for Seed; also when Corn is more than ordinarily moist, or more than ordinarily dry, both are very ill signes, and shew either imperfect Corn, or imperfect keeping, for the best and good Corn indeed, ever holdeth an indifferent temperature, betwixt driness and moisture.

CHAP. XVII.

How to keep all manner of Grain, either thrasht or unthrasht, with least loss the longest time; and how to preserve it from all infirmities, and Vermine in the House or Garner.

Keeping of
Corn two-
fold.

TO proceed to the keeping and preserving of Corn and Grain, it is to be understood, that it is to be done two several ways, that is to say, in the Ear, and out of the Ear, in the stack, when it is cleansed and dried.

Keeping Corn
in the ear or
in the chaff.

Touching the keeping of Corn in the Ear, or in the Stack, there is no better nor safer way than that already described in the sixteenth Chapter, being free from all offences whatsoever, that can come to hurt it.

Now there be others that cut off the Ear of their Corn, and then put them into great Chests or Huttches of wood (such as are very frequent and much used in Ireland, and other Countreies where War rageth) and so keep it sweet and good many years:

Others

Others use to beat it out of the ear, but not separate it from the Chaff, and then laying a lear of the Straw more than a foot thick, to lay a good thick lear of the thrasht Corn; and thus lay lear upon lear, till you have made up your stack, in such proportion as you shall think convenient; and this will keep all kind of Corn, or Grain, or other Seeds, sound, sweet, and fit for any purpose, at least a dozen years, or more, as some have supposed, without either too much drying, withering, moistening, or moulding. And surely this is a very excellent way for the storing up of much Corn in a very little room, and may as well be done with Corn as with straw; only it is not to be done in Barn nor House, because Mice, Rats, and other kind of Vermin will work much destruction thereupon, but on a Stack or Hovel made and proportioned in such form as was shewed before in the sixteenth Chapter, and so it will stand safe without all annoyance, as long as it shall please the owner to keep it; sure I am, it will last thus fully twelve years; yet some Authors affirm, it will last fifty years, but that is a space of years beyond my trial.

Touching the keeping of Corn after it is thrasht and drest, it is divers ways to be done, as by stowage or place of lear, as Garners, Hutches, and such like, by labour and industry, as with the shovel, or else by device or medicine.

Keeping of
Corn out of
the Ear or
drest.

For Garners, they be made divers ways, according to the nature of the Country, and custom of the people.

Of Garners.

Some are made with clay, and some trodden with hair, straw chopt, and such like: but these are the worst, and do soonest corrupt Corn; for although they are warm, which is a great preservation to Corn, yet they yield dust, and from that dust is bred fleas, mites, weavels, and other Vermin which do spoil Corn, and make it easily rot.

Others are made of stone and lime, but they are subject against wet weather, to yield forth a moist dew, which corrupteth and rotteth Corn.

Others are made of Brick and Lime, and they are very good against the Weavel, and other small Vermin, but the Lime is sharp, and so consequently very unwholesome for all manner of Grain.

The best Garner that can be made to keep all manner of Grain
in,

in, is made of playster, burnt, and brought into mortar, and so railing it up with the help of small stones hidden and placed in the midst of the wall, to make both the inside and outside of the Garner of smooth playster, no stone being seen but hidden at least two fingers thick on each side, and all the bottom also must be made of playster; for no floor keepeth Corn so well, of what kind soever it be; and these Garners would be placed as near as you can to the backs, or sides of Chimneys, or as near the air of the fire as you can conveniently; for as there is nothing more cold then plaister, yet it is ever so dry and free from moisture, that with no change of the air or weather it relenteeth, but keepeth the Corn ever in one state of goodness, whilst the warm standing thereof is such a comfort in the winter, and the natural coolness of the thing so sovereign in Summer, that the grain ever abideth in one state without alteration.

Now for Hatches, or great chests, bins, dry fats, and such like, they are made of old, dry, and well-seasoned Oak-boards, plain-ed smooth, and close joyaed and glewed together, with covers and lids made also very close, whereby little or no air can come in: some of these great Bins, or Hatches, made of dry boards, are made open and without covers, but they are not so good, for the air covering the upper-part of the Corn, and the middle part sweating, breedeth corruption, or mustiness, which hurteth and spoileth the Corn: besides, they are somewhat too warm, and thereby make any green Corn apt to corrupt and smell.

Of Hatches.

Touching the use of Garners and Hatches, they are principally to keep Malt after it is dried, or Barley, which is for the use of bread or meal; and here is to be noted, that the best manner of keeping Malt, is to keep it in the Corn, that is to say, in the dust, and other filth which cometh with it from the Kilne, as thus; when first you lay your Malt on the Kilne to be dried, you know there is at one end a certain sprout, or small thred, which grows from the Corn, and is called the Come, which by the rubbing and drying of the Malt falls away, and leaves the Corn clean, and smug of it self, and when you trim and dress up your Malt for the Mill, is winnowed and cleansed away: This you shall preserve and put altogether into your Garner or Hatch, which

which will be so mellow and ripen your Malt, that in the spending thereof, a peck will go further, than a peck and a half kept of a contrary fashion; and although some are perswaded that this Come or Malt dust, is a great breeder of the worm or weavel, by reason of the much heat thereof, being indeed of the purest of the heart of the Corn; yet it is not so, unless some rankness or moisture do get to the Corn; and then it breeds weavels in infinite abundance, and therefore by all means be sure that your Garners and Hutches do stand exceeding dry, and then there is no fear of the loss of Corn, nor shall you need to dress or winnow your Malt but as you spend it.

Lastly, here is to be noted, that although I here joyn Garners, Hutches, Chests, and Bins together, yet I make them not all of equal goodness, for the plaister Garner is absolutely the best of all, the close Hutch or Chest next, and the open Bin last; yet any, or all, sufficient enough to keep Malt, Barley, or small Seeds, divers years without imperfection.

It is written by some of the antientest Authors, that Wheat hath been kept in these close Hutches or Chests sweet, the space of fifty years; yet I hold the rule somewhat doubtful, both because Wheat of it self, lying so close packt together, is apt to heat and sweat, and that heat commonly turneth to faultiness, and the sweat to corruption; but that it may thus be preserved from worms, weavels, mites, and other vermine breeding in Corn, it is doubtless and infallible.

Now for the preservation of Wheat, which is the most principal grain, of greatest use, and greatest price, and therewithal most tender, and aptest to take hurt, the experiments are divers, as mens fancies, and practises have found out; for some Husbandmen hold opinion, especially the *French* and *Spanish*, That if you take the Lees of common Oyl (so it be sweet) and sprinkle it upon your Wheat as it lies, either in the Garner, or upon the floor, that it will preserve it from all corruption and annoyance whatsoever, nor doth it preserve Wheat only, but all other manner of grain whatsoever; nor doth it preserve Corn alone from mischief but if Corn by casualty be tainted or hurt; it doth recover it again, and brings it to the first sweetness; and if either worms or weavels be bred in it, the Oyl presently kills,

To preserve:
Wheat;

kills them, and frees the Corn from that mischief; as for smaller seeds, as hemp, line and rape, this Oyl doth not only keep them long and sound, but also feeds and nourishes them, and makes them better, either for the ground, or for use, either in the mill, or in Medicine.

There be others that use to take Chalk, and beat it to powder, and then scatter it amongst their Wheat, when they put it into the Garner, and have found that thereby their Grain hath been wonderfully preserved from all imperfection; and surely there is great reason for the same, because the driness of the Chalk drinketh up the moisture which sweateth from the Grain, and is the first breeder of all putrification: Also it cooleth and asswageth the immoderate heat which is ingendred in the Corn, by reason of the packt and close lying together.

Again, there be others which use to lay great store of Worm-wood amongst their Wheat, which likewise preserveth it from all annoyances, especially from Worms and Weavels, as also from Mice, Rats, and such devouring Vermine; neither will the Corn corrupt or grow faulty, as long as the Worm-wood remains amongst it. In *Italy*, the careful Husbands use to take a certain dry earth or clay, called earth of *Olinthus*, or *Cerintus*, and this earth they beat amongst their Wheat, and then put it into the Garner or Hutch, and it will keep it sound and sweet divers years together; then when they have occasion to use, with small reeing sives to dress it from the Corn, and so preserve the dust, which will last and serve you many years together, even almost an age; as some have reported, and is at this day to be seen in many parts of *Italy*, and other places.

Again, I have for mine own part seen in the Island of the *Azores*, certain very great large Caves, or pits made under the earth, of the fashion of a *Spanish* earthen Lear, that is to say, great and spacious in the midst, and narrow both at the top and bottom, like a brasse Pot, or great glass Vial, and made as smooth within as may be, and in these caves or pits, they first lay chaff, and then their thrasht Wheat, filling it up full to the top, or within a handfull thereof, which they fill again with Chaff, and then closing the top with a broad stone, they cover

it over with earth so close and unperceivable, that you may walk or travel over it without any suspicion; and for mine own part, I have my self digged up many of these pits; and found great store of Wheat, both in the High-ways, and other most suspicious places; and surely it is thought, and experience in those places makes it good, that in these Caves or Pits you may keep Wheat as long as you please, as *Pliny* speaketh of, which is an hundred, or an hundred and twenty years, without hurt or putrefaction, either of heat, moisture, worms, weavels, or any other Vermin whatsoever which consumeth or devoureth Corn; yethow I may recommend this experiment to our Nation, I am uncertain, because the much moisture of our Climate, and the cold rawness thereof promisseth a contrary effect; for the great enemies unto grain, are violent cold and moisture, and with us it is very difficult to make any Caverns under the earth but they must be subject unto both: Therefore only to those which live in hot sandy Countries, high and free from springs or waters, or in dry and rocky grounds, where these mines or hollow places may behewed out, as in a main and firm Quarry, I recommend the trial of this practise, with this assurance, that where the ground is fit for that purpose, as any of your sand grounds or gravel earths, as in *Norfolk*, *Middlesex*, *Kent*, and many other sandy Climates; or in rocky situations, as in *Nottingham*, *Bath*, *Bristol*, and such like, you may keep your Wheat good, sound, firm, and free from all annoyances, even as long as you shall please to keep it, both without putrefaction in it self, or waste made by other devouring worms and vermin, but if in a more moist place, as in clay or other mixt earth, which ever is vomiting wet and dew with humours, you are forced to approve this experiment; then you must necessarily lime all your Cave or hollow Mines within, at least half a foot thick with rylether'd and plaister laid wall-like together, and then the plaister dawb'd at least three fingers thick above all, and so you may keep your Corn as safe and as sound as any hot soyl whatsoever; but without it your Corn will not endure a week without rottenness, faultiness, mouldiness, and stinking.

To conclude, having shewed you all the most approved and best experiments for the keeping and preserving of wheat, there

is none better, or so good as this silly plain one, which I will here deliver: and that is, first, as near as you can, reap your Wheat at the change of the Moon; for Wheat which is so reaped, is seldom or never subject to loss or putrefaction (being got in dry, or in husbandry manner ordered and handled) because that Celestial body hath such a power and influence in the growth of Corn and Seeds, that as she groweth, so they grow, and as she waneeth, so they abate and wither.

And truly for my own part, in my poor Husbandry, I have made this observation, that I have reaped Corn at the beginning of the wane (to mine eye and judgment) great, full, and bol'd as the Plow-man calls it, and within few days after, when it came to thrashing, I have found it most poor, hungry, and small Corn: nor could I give or find any other reason for the same, but that it was reaped in an ill and most unseasonable time: for, on the contrary part, I have ever found that Corn reaped upon the change, being ripe, full, and every way fit for the Barn (and the weather fair and dry above head) it hath never altered, but kept his first and perfect goodness; so that I cannot chuse, but in this case think the observation of the Moon to be a thing of great effect and validity, appointed by God as a second means for our help and profit: when therefore your Corn is thus seasonably and well got in, you shall thrash it, winnow it, and dress it so clean as you can, then carry it up into your Chambers or lofts appointed for that purpose, of whose floors by all means I would wish to be cast of the best plaister; for boards is too hot, and clay is too apt to breed Vermine: On this plaister floor you shall spread your Wheat, not above a foot thick at the uppermost, and so let it lie, observing once in four or in five days at the most, with a large wooden shovel to turn the Wheat quite over and over, and thus doing, you shall be sure to keep it as sweet, sound, and good, as when it first came into the Barn: for neither can the heat, sweat, nor coldness offend it, the first being cooled and tempered by the opening and dispersing; the second dried up by the air which hath free recourse unto it, and the last comforted by the labour and tossing of the shovel, casting it up and down from one place to another: and though some curious Husbands may object, That this manner of keeping Corn drieth it

it somewhat too much, and thereby disableth it for some particular purposes, as for seed and such like: yet in that they are much mistaken; for this stirring and moving of Grain, is not a drying of it, but rather a great comforter and strengthner of it, dispersing back into the Corn, those wholesome vapours which should do it good (by way of communication and fellowship with the Grain) and expelling those ill humors which sweating out of it would otherwise confound and hurt it, so that in conclusion, for the true and long keeping of Wheat sweet, sound, and perfect, without loss or corruption, there is no way more safe or easie, than this last expressed, being of all other the best, although in shew it appear sleight and trivial, as for the most part things of the greatest moment in this nature do: but to the judicious Husbandman I refer it, whose aim is at the worth and substance, not at the words and curious gloss, set forth in strange ingredients.

Touching the keeping of Rye, or Massin, or, as some call ^{To preserve Rye.} it, Munk-corn, or Blend-corn, being part Rye, and part Wheat mixed together, that which preserveth Wheat, will also preserve it, for they are Grains of like nature, only the Rye is somewhat hotter and drier, and therefore will endure somewhat more moisture: yet to speak particularly touching the preservation of Rye, there is nothing better than the plaister floor, and oft turning; the close Hutch is also exceeding good, so is the Pipe or dry fat, but being once opened, and the air entering into the Corn, except it be soon spent, it will soon putrefie; for though in the close keeping, it last long, yet when it comes to the air it will quickly receive taint. Lastly, for the profit in keeping of Rye, indeed there is nothing better than to ply it, and tread it hard into Vessels or Barrels, wherein salt hath been much lodged, or other brine or salt matter: provided always that the Vessels be sweet and untainted, no ways subject to faultiness or other unfavoury smells, from which there is no preservation.

Concerning the preservation and keeping of Beans, which ^{To preserve Beans.} are indeed a more gross and fatter Grain than any heretofore written of, and out of the fulness of their substance, more subject to moisture and those dankish humors which corrupt Corn:

The careful Husbandman observeth two Rule, first, not to thrash any Beans or Pulse, more than for necessary use (as for the Stable or Mill) before it be middle *March*, at which time the Grain, having taken a kindly sweat in the Mow, Stack, or Hovel, is become so dry, firm, and solid, that no floor, wall, or other place of Lear can make it relent, or give again (except great abuse, and too moist keeping) for it is to be understood, that this sort of Pulse or Grain is of it self so exceeding moist and apt to sweat in the Mow, that all Husbandmen endeavour by no means to house it, or lay it within doors, but seek to make it up in stacks and hovels without doors; not so much that house-room is wanting, as that the benefit of the Sun, and Air, which pierceth through the same, drieth and ripeneth the Corn in such kindly manner, as maketh it as serviceable as any other: and indeed, the first invention of stacks, hovels, reeks, and such like, did not spring so much from the want of housing, as from the good and profit which the Husbandman found to accrue to this kind of Grain, only by reason of laying it abroad; for it is certain, that Beans and Pease neither grew together, nor ripen together, but put forth their increase one after another; for you shall see upon one stalk, blooms, swads and ripe cods: so likewise in the gathering of Pulse (when it is reaped from the ground) you shall see some dry and withered, some ripe, some half ripe, some absolutely green, and as but now in growing.

Now all these must be reapt together, and if you stay them in the field till all be of like driness, questionless the oldest will shake and shed upon the ground before the youngest be ripened, and what that loss will redound to, every Husbandman can judge: So also to house and mow up in a close mow, the dry Pulse with the green, surely the green cannot chuse but inflame and heat the dry, and the dry so heated, to give fire to the green, till both be either rotted or consumed; and hence it came, that expert Husbandmen devised to lay their Pulse, for the most part, ever without doors, in stacks, reeks, and hovels, that the Sun and wind passing thorow them, might bring all the grain to an equal driness and hardness.

Again, Pulse being of all grain the coarcest and fullest of substance

stance in it self, and the straw ever big and substantial, and full of broad thick leaves; ever moist and sappy; it must needs follow that this grain must ever be most apt to sweat in the mow, and so necessarily craveth the greatest store of air, and the longest time in drying; so that to return to my first purpose, it must needs follow, that no Beans or Pease can be ripe or seasoned in the mow, till it be mid-March at least; for it is an old saying, among the best Husbandry, *that a March wind is salt which seasoneth all Pease*: And if use or necessity compel men to thrash their Pulse before that time, the Grain is so imperfect, that it must be Kilne-dried, or else it is fit neither for the use of Bread nor Provender.

Now herein is to be understood, that Pease or Beans which are Kilne-dried, may be kept sound, sweet, and good, either on plaster-floors, boarded-floors, or earthy-floors; the space of many years, without turning, or totling; nor need you to respect how thick the heap lie, since Beans alter they are once dried on the Kilne, or in the Sun, never after will thaw, give again, or relent, but remain in their first soundness: But if you preserve your Beans for other uses, as to boyl in your pot, and feed your Servants withal, as is used in *Somersetshire*, and many other Westernly parts of this Kingdom, then it shall be good for you to take Oyl-barrels; Oyl-cask that is sweet, and first calk them all over within and without with ashes, and then put your Beans therein, and close up the heads, and as it is affirmed by divers great Authors of Husbandry, it will keep Beans sound, sweet, and good, twenty years; nay, some give instances of Beans which have been thus kept and preserved the space of one hundred and twenty years; and surely I am perswaded that if Beans be well and dry got, at thrasht at a seasonable time of the year, as in *March, April*, that thus kept, they will last the utmost of a mans pleasure.

Now for the keeping or preserving of Pease or Fetches, which of all other Grain whatsoever, is most subject to rottenness and imperfection, because out of its own nature it is apt to be bred Worms, Weavels, and Mites, by reason of the much lushiousness and sweetness of the kernel of the Grain: you shall in all things observe the same courses that you do with your Beans,

Preserving of
Pease or
Fetches.

Beans, both touching your gathering, drying, stacking, and also thrashing; for as they are most apt to go together, being near of nature and condition one to the other, so it is fit that you do apply unto them one and the self same Medicine or remedy.

And herein is to be noted, that as Pease are of more general use then Beans, as for Horse Provender, feeding of Swine, Pidgeons, Pullens, and such like; as also for Bread, Pottage, to boyl with or without meat; for certainly, it is a most wholesome and strong food, as may be seen by the people of *Devonshire*, *Cornwal*, and *Somersetshire*, of whose great strength of body not any reason can be given more probably than their much feeding on this grain, and their acquaintance with much and strong labour. So they ought with more care and circumspection to be preserved from all those annoyances that naturally are apt to hurt them, as worms, rottenness, mould, mustiness, and such like.

And first, there is nothing better for the long and well keeping of Pease, then the very well drying of them, either in the Sun, or on the Kilne, especially those which you use for Bread, Provender, or feeding of Swine: and although some Husbands use to feed Swine with undried Pease, nay, many times both undried and undrest, that is to say, the Pulse or Chaff not taken away; and are of opinion that the Grains so given, sooner feedeth and fatteneth up Swine than the other, yet they are deceived; for albeit it swell and puff up a Beast, yet is the flesh and fat neither so good, sound, and long lasting, as that which is gotten with dry food, nor doth it make a Swine so thirsty; and the Husbandman is ever assured, that when his Swine drinks not well, he feeds not well: therefore what Pease you keep for Bread, or feeding of Cattle, by all means dry them well, and lay them either in Garners or Floors, and they will last sound and good without breeding worms or weavels, as long as you please. But those which you keep for food at your own Table, as in Pottage, or other uses, must by no means be too much dried, because then they ask a double time in boyling, and spend a double quantity of fuel in their preparing.

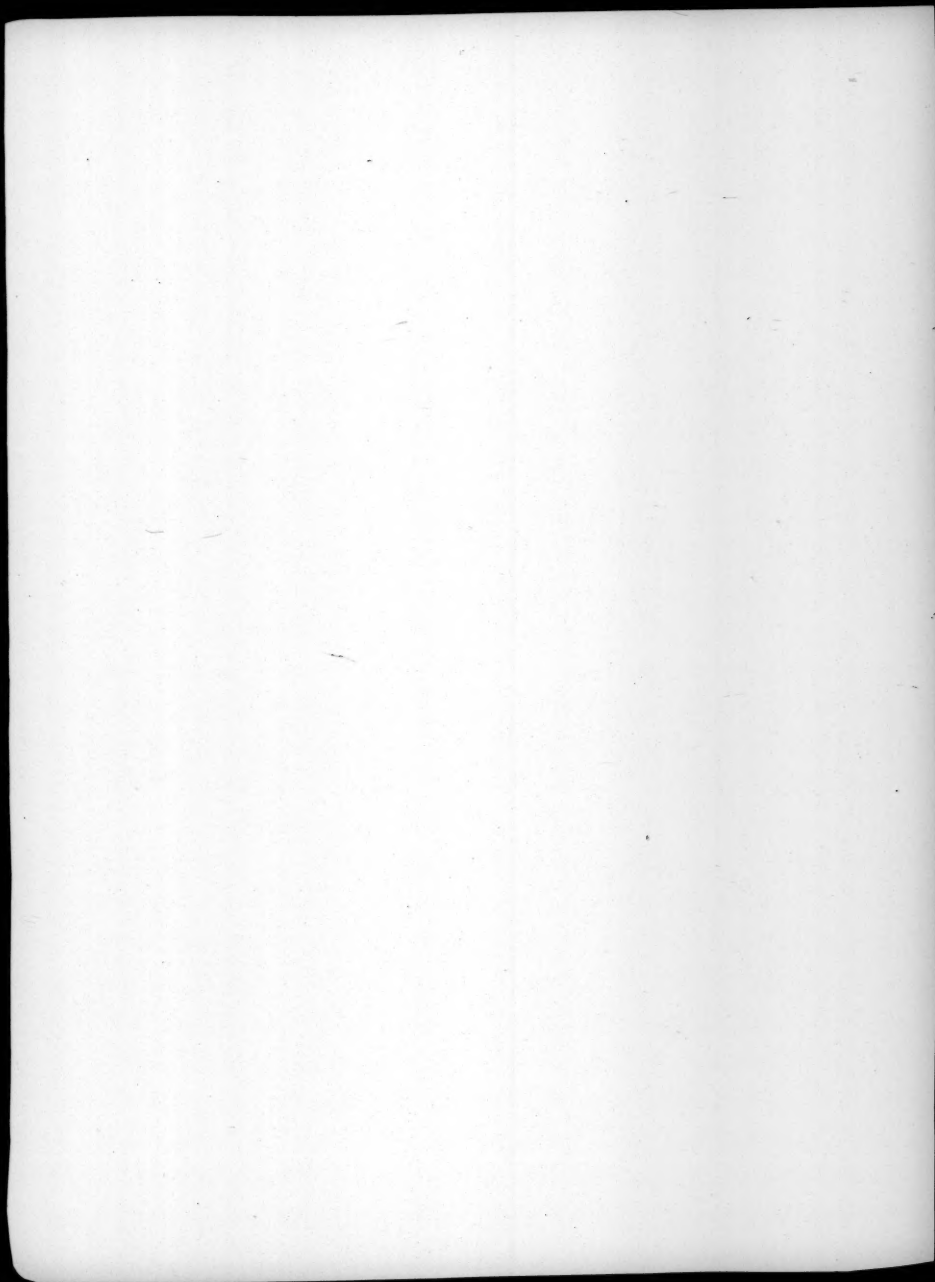
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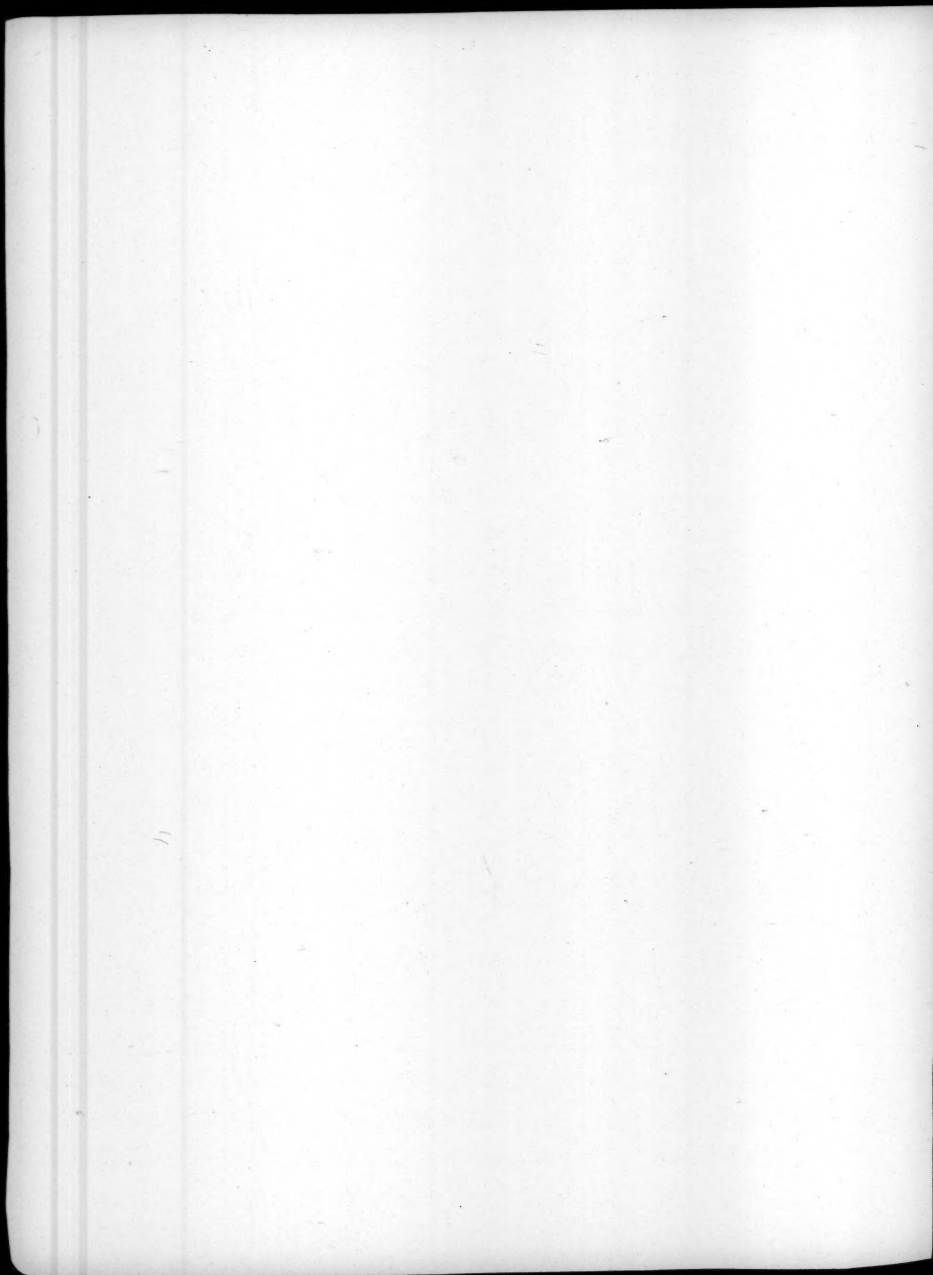
Some use after they be clean thrasht and drest, to lay them in a cool close Garner, either of Plaster, Earth, or Boards, of which Plaster is the best; as for any thing that relenteth, or yieldeth moisture, as lime, stone-walls, or such like, it is most hurtful, and immediately maketh Pease mould and rot: also it is good to lay your Pease in thiek heaps in your Garner, for that will preserve them moist the longer time; but to spread them thin upon the floor, by which means the Sun, Air, and Wind may pass thorow them, is not so good, for it drieth them too sove, and taketh from them much of their sweetness and goodnes, which ought most carefully to be preserved. There be others which preserve these tender meat Pease by thrashing them up, and then letting them lie in their own Pulse or Chaff, and not dressing them, but as they have occasion to use them; and questionless this is a very good and laudable way; for the Pulse and Chaff doth maintain them sweet and moist, and yet keepeth them with-
out so warm and comfortable, that they last much longer, than any other way whatsoever; and in this manner of preserving Pease is to be noted, that by all means you must let them lie upon a dry earthen floor, so long as they are in the Chaff, rather than on the board, or on Plaster, and yet in this case the boards are better than Plaster.

Lastly, and which indeed is the best experiment of all other, if you intend to keep Pease any extraordinary long times, you shall take Barrells or dry Casks, well and strongly bound, and pitch them within exceeding well with the best Pitch or Bitumen that you can get, and then sprinkle the Pitch all over with strong Vinegar; then take your Pease, being clean and well drest, and put them into the Barrells, pressing them down close and hard; then head up the Barrells, and let them stand dry and cool, and they will preserve your Pease sound, sweet, and good for any use whatsoever, as long as you please, be it for ten, twenty, or thirty years, according to the opinions of ancient Husbandmen, and other Provant-Masters, that have lived and commanded in Towns besieged, and Towns of Garrison; neither shall any worm, mite, or weevle ever breed in it, or offend it; nay, if any have in former
time

Preserving of
Lentils or
Lupins.

time been bred in them, this manner of keeping the grain killeth them, and destroyeth them for ever. Now there is another sort of Pulse, which are called Lentils or Lupins, which albeit they are not so generally used for the food and sustenance of man, yet they are for Horse, Swine, and other Cattle, as much in request as any grain whatsoever, and indeed do feed fatter, and sooner than other ordinary Pulse, and the flesh so fed, is sweeter and pleasanter both to the eye and to the taste, than that which is fed with Beans or Pease; also they are a Pulse very Physical and good for many Medicines, as may appear by the works of many learned Physitians, and these the longer they are kept, the better they are, and fuller of profit. To preserve them in good and sound estate, it is meet to reap them in very fair weather, and to stack them up exceeding dry, and if they be laid in the Barn, or any close house, it is not amiss, for they will indure housing better than any other Pulse, yet the sooner you beat them out of the straw, or thrash them up, the better it is, for Husbandmen suppose there is no greater hurt to this kind of Grain, than the long keeping it in the straw; for it is of such rankness, that the very straw and cob breed in it much putrefaction, and I my self observed both in *Spain*, and in the neighbouring Islands, where is great abundance of this kind of Grain, that they do no sooner gather it and bring it home, but immediately they thrash it; nay, some thrash it in the fields upon the lands, where it grows, and so bring it home, and then spread it on fair boarded floors in very great heaps, or lay it up in close Hatches, or Bins, such as wheat, and other white grain is, to be kept in. If you dry this kind of Pulse in the Sun, or upon a kilne, with a very moderate and soft fire, and then lay it up either in a close Garner, or close Hatch, it will last many years sound, good, and without corruption. There be other Husbandmen, which mix with the grain, when it is thrashed, a half-part of hot, dry, white sand, or at least cover the whole heap of pulse with the sand, and do find that it keeps the grain very sound and good many years together. But to conclude, if you take strong vinegar, and a good quantity of *Laserpitium*, dissolve and mix them very well together, and then having laid your Lentils or Lupins together or





a fair boarded floor, in large, broad, and flat heaps, about two foot, or two foot and a half thick; with the vinegar and *Lefer-
plum* sprinkle over all the heap, and not any change of weather,
frosts, worms, or other vermine shall do them hurt, but they
shall remain sound and good as many years as you please to
keep them: there are other Husbandmen, that instead of this be-
fore rehearsed, take only sweet Oyl, and sprinkle it all over the
Grain, and find the same vertue and effect, for neither worms
nor other Vermine will touch it, nor will the radical humour
thereof at any time waste or decay, but remain strong, full, and
sound, without any kind of diminishing; nor shall you find any
abatement of it, or shrinking in the measure, but that which was
a bushel this year, will be also a bushel the next year, and as
many years after as you please, which is no small profit to the
owner.

Whereas on the other part, if the Grain be either dried in
the Sun, on the Kilne, or by the Wind, you shall hardly have
of every such bushel so dried, three pecks and a half again,
which is by computation at every quarter, which is eight bu-
shels, full one bushel lost, and yet this purchase thus preserved,
as before said, shall be as good for any use whatsoever: fit for
such Corn to be employed in, as any other dried grain whatsoe-
ver, and yield as much every way, and altogether as good meat,
and as good meat.

Now touching the preserving and keeping of Oats, it is to Preserving of
understood, that of all grain it is least casual, because of it self Oats.
naturally it breedeth no evil vermine, and is again preserved and
defended with a double Husk, whereby neither cold, moisture,
heat, nor drincks, is able so soon to pierce and hurt it as other
grains, which are more thin clad and tender; yet because it is of
great and necessary use both for Cattle and Pullen, and that nei-
ther the Husband nor Housewife can well keep house with-
out it; you shall know, that the best way to preserve it longest,
after it is threshed, to dry it well, either in the Sun or on the
Kiln, and then either put it in a close Garne, or close Cask, and
it will keep many years sound and sweet.
Touching the preserving of Oatmeal, which is the inner Kith-
of the Oats, and a Grain of most special use in the House-
band.

bandmans house, as in his Pottage, in his Puddings, and in many other meats necessarily used for the labouring man; it is an experiment not altogether so curious as any of the rest formerly written of, for no Oat-meal can be made, but the Oats must be exceedingly well kiln dried, or else the kernel will not part from the hull, and being dried, as is fit, that drying is sufficient to keep and preserve the Oat-meal divers years.

Provided ever, that presently after the making of your Oat-meal, you put it into dry close Cask, or dry close Garners (but Cask is better) and so that it may remain exceeding dry, (for any thaw or moisture corrupts it) and as near as you can, let it have (if it be possible) some air of the fire, for the warmer it stands, the better and longer it will last, as experience sheweth.

Preserving of
any meal.

For the preserving and long keeping of any sort of meal, there is no better way than first to bould and searse him from his bran, for the bran is very apt to corrode and putrifie the meal, and to bring it to a faultiness or muckiness: then into very sweet and clean dry cask close and well bound, tread in your meal so hard as you can possibly tread it, and then head it up close, and so you may either keep it by land or water so long as you please, and when you have any occasion to spend of it, be sure to loosen no more of the meal than you presently use, for the faster and closer the meal lieth together, the longer and sweeter it will last, for it is the gathering of the air that only corrupts it.

And here is also to be noted, that you should not presently as soon as your meal is ground, bould it from the bran, but rather let it lie a week or fortnight in the bran, in some close bin or trough, and then after that time bould or searse it, and you shall find it to afford you in every bushel, more meal by at least half a peck, than if you should presently bould it as soon as it comes from the hulls, whence it proceeds, that the cunning and skillful Baker will ever have a week or fortnights provision of meal beforehand, which lying so long in the bran, pays double interest for the continuance.

Now if it fall out so, that either by trade or merchandise, or other occasions, you buy any meal by way of transportation, which is to be sold up, (as much meal is sold by the barrel) you shall presently as soon as you have bought it (if it be for your own

use

use or expence, break open their heads, and empty the meal upon fair sheets on a clean floor, and then spreading it abroad, let the Sun and Air pass thorough it, which will dry up the sweat; and if there be any taint of foulness, take it away, and bring the meal to his first sweetness, and then immediately bould out the coarse bran, and after, as was before declared, tread it hard into fresh and sweet cask; and thus you may keep your provision of meal all the year long: nay, if need require, two or three years; for after the first sweat is taken away, and kindly dried, there is no doubt to be made of any that shall follow after.

Lastly, touching the preservation and keeping of all manner of small seeds of what nature and quality soever they be, whether Hemp, Lime, Rape, Mustard-seed, or any other Garden-seed whatsoever, though truly and properly they last but one year, nor are fit for Seed or Increase after that date expired: yet in as much as they are medicinable after, and a much longer time; therefore you shall understand, that the best way to keep them safe and sound, and fittest for use and profit, is, first to gather them as soon as you perceive them to be ripe, and the weather being bright, clear and dry, then you shall dry and wither them in the shade, and not in the Sun, especially upon a plaistered floor, where the Sun looketh to the South, and be sure that as little Sun and moisture come to them as you can, for both are main enemies; which done, bind them up in bundles without thrashing, and so hang them up, and keep them in their own coats, and they will last for all uses, a full year, and for some particular uses two or three years; and in this manner you may also preserve all manner of herbs, weeds, flowers, roots, and the barks or rinds of all manner of trees.

Preserving of
all small seeds.

C H A P. XIX.

How to keep Grain, either for transportation by Sea, or for use in a Town of War or Garrison, from one year to one hundred and twenty.

TO speak of the Grains and Pulses which are meetest for the Sea, and their several uses.

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use or expence.) break open their heads, and empty the meal upon fair sheets on a clean floor; and then spreading it abroad, let the Sun and Air pass thorough it, which will dry up the sweat; and if there be any taint of faultiness, take it away, and bring the meal to his first sweetness, and then immediately bould out the coarse bran, and after, as was before declared, tread it hard into fresh and sweet cask; and thus you may keep your provision of meal all the year long: nay, if need require, two or three years; for after the first sweat is taken away, and kindly dried, there is no doubt to be made of any that shall follow after.

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Preserving of
all small seeds.

C H A P. XIX.

How to keep Grain, either for transportation by Sea, or for use in a Town of War or Garrison, from one year to one hundred and twenty.

TO speak of the Grains and Pulses which are meetest for the Sea, and their several uses.

The use of
grain and
Pulse at Sea.
Of Rice and
the Use.

It is to be understood, that the best and principallest Grain which is indeed both most sweet, most fresh, most pleasant in taste, and most lasting, is Rice, which although it grow not much in our Kingdom, but that we are beholden to our good Neighbours for the trade thereof, yet it is in such plenty where we fetch it, that we need neither complain of the scarcity, nor the cost, and so much the rather, in that a peck thereof will go further then a bushel of any other Grain: Of this Rice is made many good and wholesome dishes, some thick, some thin, some baked, some boyled, as thus: If you take a quarter of a pound of Rice, and boyl it in a pottle of water, till it come unto an indifferent thicknes, and then put it into a good lump of potted or barrell'd butter, and as much Sugar as shall salt-wile season it to an indifferent sweetness, it is a dish of meat meet for an Emperour at Sea, wholesome, good, and light of digesture, and will be as much as four reasonable men can well eat at a meal; for the nature of Rice is such, that it will swell in boyling, and grow to that bigness, that in an instant it will thicken a pottle; some use the night before they boyl it, to steep it in so much water, as will only cover the Rice all over, and then the next day boyl it in a pottle of water or more, and the Rice so steeped will so swell, that all the first water will be drunk up, and a great deal of less boyling will serve to make it ready; and sure, than this a man cannot find a cheaper way to feed men, since one pint of water, and the fourth part of a quarter of pound of Rice (which come not to above half a penny at the dearest reckoning) is a meal sufficient for a mans eating, having Bisket and Drink proportionably. And this dish of meat being thus thin boyled, is called Sea-Lob-lolly, and after salt feeding, is wondrous wholesome and comfortable to any man whether he be sick, sound or diseased, and both abateth infirmities, and hastneth the healing of all wounds.

There be others, that after they have steeped this Rice (as afore-said) do then boyl it in like manner, till it be so thick, that a spoon may stand upright in it, and no liquidness of the water perceived; then put a good lump of butter into it, and boyl it with it, and stir it about, and it will make it come most clean out of the pot in which it is boyled; then season it with

Sugar.

Sugar, and a little Cinnamon, and it will be a dish of meat right good and delicate, and meet for any man of what Quality soever, that is worth goodneſs or preserving; nor need the quantity exceed the proportion already preſcribed.

Again, if you have Meal in the Ship, if you take of this Rice ſteeped in water, and a little lightly boyled and ſeaſoned with Sugar, Cinnamon, and Ginger, and a good quantity of Butter, and then bake it in little Patties, you ſhall find it a moſt delicate pleaſant, and whoſome meat, and that a penny in it ſhall go further, and give better contentment than four penny worth of Beef, Bacon, Fiſh, or any other hard ſalt meat; yet I do not wiſh any man of Ship-board to make this a continual feeding diſh, for then it is both too pleaſant and too ſtrong, and where evacuation of ſome humours are wanting, may breed inconveniences in ſtrong bodies; but rather uſe it once a week as a Physical nouriſher, or for the comfort of ſick and diſeaſed men; whoſe ſtomachs are tane away, or elſe weakned; there may be made alſo of this Rice in time of neceſſity (being ground to a fine meal) an excellent good Bread or Ruſk, which is pleaſanter, ſweeter, and much longer laſting than any made of Wheat, or any other Grain whatſoever; beſides many other Seeds, which would in this place ſhew but too much curioſity to repeat.

The next Grain unto Rice, which is of eſtimation and great ſervice at Sea, is wheat, of which although there be divers kinds, yet they are all alike for the ſerving of this purpoſe; only the large and thick hulled wheat being well dried will laſt the longest, but the ſmall and fine ſkinn'd Wheat yields the purer flour, and makes the better Meal: Now of this Wheat is made divers diſhes of meat, for ſome take it, and bruife or beat it in bags till the upper ſkin be beaten off, and then having dreſſed and winnowed it, boyl it in clean water till it burſt, and grow as thick as Pap, then take it from the fire, and being hot, put it into ſeveral diſhes of wood, or trays; ſo much in every diſh, or tray, as may ſerve four men, and ſo let it cool, then give it to the ſick or ſound as you ſhall be directed, and it is an excellent good meat, either cold or elſe hot, and a little butter melted with it, or being again boyled in freſh water, and ſeaſoned with Salt and a little Sugar, it makes an excellent Grewel, or Lobſolly, which is a very ſovereign

Wheat, and:
the uſe.

reign at Sea. Also your parched Wheat is a very good food at Sea, and of much request and estimation, being sprinkled with a little salt; and of this food a little will serve a man at a time, by reason that the much sweetness thereof soon filleth and cloyeth the Stomach, yet it is wondrous light of digestion, and breeds great strength, and much good blood, as we daily find by experience.

Of Oat-meal
and the use.

The next Grain unto this which is to be recommended to the Sea (and which is indeed not any thing inferior to either of the other going before, both for strength and lasting) is Oat-meal, which by reason of the great driness, and drying thereof, feels little or no imperfection at the Sea, as being unapt to suck or draw in any of the ill or moist vapours thereof. Of this Oat-meal is made many good stews, and comfortable meats at Sea, as Grewel, or Lob-jolly, by boyling it in fresh water, and seasoning it with Salt, and (if you have it continually) sometimes with Sugar and a few Currants, and a little Mace, which is meat of great strength and goodness, especially for such as are sick and weak; for it is a great restorer of nature, and a purger of the blood; also to steep the whole Grotes of Oat-meal a night in water, and then draining them, and putting it in a bag, boil it till the Grots break; then putting it out of the bag, butter it with butter, and it is excellent food; as also boyling Oat-meal in fresh Water with Barm, or Dregs, and the hinder ends of your Beer-barrels, makes an excellent good pottage, and is of great use in all the parts of the West-Country, especially where Mariners or Sea-men live, and are called by the name of Drouston pottage. Also, of Oat-meal is made that meat which is called in the West, Washbrew, and may be made at the Sea at your pleasure, being a meat of that great account amongst *Devonshire* and *Cornish* men, that they will allow it to be a meat of singular great strength and goodness, and withal so light of digestion, that a man can very hardly surfeit upon it at any time; and I am the rather induced to believe the same, because I have observed and seen many of the labouring men of that Country to eat such an unreasonable quantity thereof, that in mine eye one mans Supper would have served a whole family.

But

But you will say, Hunger and labour are such excellent Sauce, that they digest any thing.

To that I answer, That I have seen Gentlemen and Gentlewomen of that Country, of whom as much curiosity hath attended, as is liable to the City; nay, such as have had sickness, their best familiar, yet eat of this with great and sharp appetite; and when health was most to be feared, then to boast of most soundness. This *Wash-brew* is to look upon like Painters Size, or new made Jelly, being nothing but the very heart of the Oat-meal, boyled and draiped to that height and thickness, having neither Hull nor Bran in it, but the pure Meal and Water, and is to be eaten either with Wine, strong Beer, or Ale, or with clarified Honey, according to mens Humours and abilities. Now this the eaters thereof affirm, that by no means it must be chewed, but rather swallowed by the spoonful whole, because chewing like a Pill makes it taste unpleasant. There is again another meat to be made of Oat-meal, which is called *Gist-brew*, and is somewhat more coarse, and less pleasant than *Wash-brew*, having both the bran and hulls in it, yet it is accounted a food of a very good strength, and exceeding wholesome for mans body; and of my knowledge much used and much desired of all labouring persons that are acquainted with it: Many other foods there are to be made of Oat-meal, but these shall be at this time fully sufficient.

The next Grain to this I account Barley, which may be every way used like unto Wheat, either to make Grewel, or to be cayed, parched, or boyled; and for Barley for this purpose of food, the best is French Barley, the next is Barley-big, or bear-Barley, and the worst are the Spice or Battledore-Barley, and our common English Barley.

And as Barley or Wheat, so you may use your Buck, and your *Siligo*, for they are of like nature, only they are a longer time in their beating, steeping, and boyling, because they are naturally more hard and more dry, by reason of the heat of the Climate, in which the best grow; and it is ever to be observed for a Rule, that the drier you keep your Corn at Sea, the better it is, and sweeter, and longer lasting.

Of Barley and the use.

Buck and the use.

Now

Of Pulse, and
first of Beaus.
The use.

Now having shewed the use of these lighter grains, I will come to Pulse, and shew their use and benefit at Sea, or in beleagured Towns: and of Pulse, I will first speak of Beans as a principal food, wholesome and strong, and though not so fine and light of digestion as of any of the former, yet exceeding hearty and sound, and a great breeder of good blood: They are for the most part to be boyled whole, till such time as they appear soft and tender, or begin to break, and then drained from the water are served in Trays, and well salted, and so eaten; a pottle whereof is thought a full proportion for four men: and of these Beans there are divers kinds, as the common Garden-bean, or the French-bean, which is great, broad and flat, and these are the best to boyl, either with meat, or by themselves, and ask the least labour, because their outer skin is most tender, and the inward substance most apt to be molified and softened; they may also be boyled when they are young and green, and when they are old and dry, and the meat at both times is good and savory.

The French-
bean.

The Kidney-
bean.

The next Bean to these are the Kidney-bean, which is flatter and lesser, & nearer the proportion of a Kidney, than the French-bean is, and this is also a Garden-bean, and whilst it is young and green is to be eaten Sallet-wise after they are boyled, both the Cod and Bean together, and it is certain a better Sallet cannot be tasted; for the Cod or Husk is every way as excellent in taste as the Bean is; but after they grow old and dry, and that the moisture is gone out of the Cod, then it is meet to thrash them, and boyl them like the French-bean, and they are every way as good meat, and as soon boyled, and as tender.

Common-field
Beans, the use.

The next Bean to these are your common and ordinary field Beans, which having tough and hard skins ask more boyling than the other beans, and are somewhat harder in taste, yet a good sound food also; there be many that parch them in the fire, and think them then the best meat, because the fire sooner breaks the skin, and softneth the kernel; because they cannot be done so abundantly, and therefore are not so much in use.

Of Pease, and
the use.

After this great sort of Pulse, I will now speak of the small sort, as Pease, and their like, and of Pease there are two kinds, the Garden-Pease, and the field-Pease, and for this use (albeit both are very good) yet the Garden-pease are best; for they are sooner boyled

boyled and are most tender, and serve for most use, as for pottage, boyling, parching, spelting; and of these Garden pease, there are divers kinds, as white pease, French pease, Hastings, Rounsivals, and such like, the first being the longest lasters, the second the pleasantest in taste, the third the earliest and tenderest, and the last largest and fullest.

The field pease are only of two kinds, as the white pease and the gray pease; and they seldome make pottage, because they are unapt to break, but are only for boyling and making of leap pease, or for parching, yet a good and a strong food: and as we use pease, so in other countries they use Lupins, Lentils, Tares, Fetches, and such like smaller pulse, but they are neither so good, wholesome, nor savoury in taste, being a kind of grain more rank, fullsome, and breeding of ill blood and infection within: these in cases of Sea-fare and war-fare, ought principally to be eschewed and shunned.

Several sorts
of Garden-
pease.

Now it resteth after this long digression of these severall grains, and their uses, with the meats and profits which are made of them, that we come to the safe manner of keeping and preserving them either by Land or Water, for Victual, or Transportation, so as they may last and indure without ill smell or rottenness.

And first for transportation of grain by Sea, it is two wayes to be done, as either in great quantities for trade and the victualling of other nations; or in smaller quantity for victualling the men in the Ship, prepared for a long and tedious voyage.

Grain for
trade.

For the transporting of Grain for trade in great quantities, it is to be intended the voyage is seldome long, but from neighbour to neighbour, and therefore commonly they make close decks in the ships to receive the grain, fair and even boarded, yet if such decks be matted and lined, both under, and on each side, it is much the better; and this matting would be strong and thin. There be some which make the decks only of mats, and sure it is sweet, but not so strong as the boards: therefore the best way of transportation, is, to have strong boarded decks well matted; and then spreading the Corn of a reasonab'e thickness, to cover it with matting again, and then to lay corn on it again, and then mats again, that between every reasonable thickness of

To transport
Grain for
Trade.

Grain a mat may lye ; the profit whereof is , that when the Corn with his own heat, and the working of the Sea shall begin to sweat, which sweat, for want of air to dry it up, would turn to putrefaction.

Then these mats thus lying between, will not onely exhale and suck up the sweat , but also keep the Corn so cool and dry, that no imperfection shall come unto it. And here is to be noted, That these mats should rather be made of dry white bents, then of flags and bulrush ; for the bent is a firm, dry, crisp thing, and will not relent or sweat of it self, but the flag or bulrush is a spongy and soft substance, which is never empty of its own and other moystures.

Transporting
of Victuals.

Now for transporting of Grains, for Victuals for the Ship, which is in much smaller quantity, because it is but for the private use of a few within the ship ; the onely best and safest way, is, to take Salt-fish barrells, or any Cask in which any Salt fish hath been piled, as Cod, Herrings, Salmon, Sprats , or any other powdered Fish ; and whilst the vessels are sweet , you shall chalk them both within and without with plaister , daubing them all over , then into them put your Grain of what kind soever it be , and head them up close , and then stow them in such convenient dry place of the ship, as you shall think fit, and questionless if belief may be given to the worthiest Authors which have writ in this kind, you may thus keep your Grain sweet, sound, and in full perfection from one year to an hundred and twenty years ; but certainly daily experience shews us, that all kind of Grain thus put up and kept , will remain sound and sweet, three, four, and as some say, seven years, for so far hath lately been try'd : and what here I speak of ship-board, the like may be done in any Town of War or Garrison, whether besieged, or not besieged, or in any other place , where any necessity shall compel ; the proof of this manner of pilling or putting up of Grain, serveth as well for Land as Sea.

CHAP. XX.


*The Enriching of all manner of barren Grounds, and to
make it fruitfull to bear Hopps.*

THe Hop of all plants is the most tender, and can endure neither too rich a ground, nor yet too poor: for being planted in the first, it bringeth forth only leaves and nobells, and in the latter yieldeth neither leaves nor bells.

Now in the first sort of Ground, which is fertile and rich, I Abating fertility. have nothing to do but only to advise how you may allay and lessen that too much fatness, by mixing your hills well with Chalk, or small sharp Gravel, if it be a hassel or mix'd mould; and with good store of red sand if it be a stiff clay, for either of these mixtures will in short space abate any fertility.

But if the soyl be contrary to this, that is, extream barren, Increasing of fertility. then you shall seek by these means following to increase the fertility. First, when you have taken a view of that barren earth, which you intend to convert to a Hop-garden; you shall first look to the situation thereof, whether it lye high or low, whether it be subject to inundations or drownings, or that it lye Choice of Earth, safe and free from any such annoyance: If it be subject to great and deep over-flows, then it is no ground for this purpose; but if it be onely lyable but to some small washings, then you may by a few small drains and sewers cast through your alleys, convey away the water to some lower grounds, so as it may not continue long in the Gardens to do hurt. Draining water. Besides, for a further safety to the Hop, you shall make your hills a great deal bigger and higher, that when any over-flow shall happen, the water may not reach above the mid-part of the hill at the most, for the root may endure moistning, but not drowning; and this water thus running through the alleys, and not drowning the root, will bring to the ground very much fertility. But howsoever, after you have eas'd your ground of these particular faults, yet the general fault, which is barrenness, will remain still: therefore, having plotted out your Garden, and fenced it sufficiently about, you shall then cast up your hills about *Michaelmas*, placing them

Castling of
hills and
allies.

them in a very orderly manner, and making alleyes between them of four or five foot breadth between hill and hill, so as a man may walk at pleasure through and about them: neither shall these hills stand all directly behind one another, for so one will

 overshadow another, which is an annoyance, but according to this Figure, where there is a largeness of space, and a by-passage, through which the Sun may come to give comfort to every Plant.

These hills, if the ground be free from water, may be raised about two foot, or a foot and a half high, and of a compass answerable to the height; neither so little, that the hill may be sharp like a Sugar-loaf, nor yet so big, that the hill may lye flat, and so retain and hold any rain or wet, which shall fall upon it; but you shall keep a due middle proportion, making the hill convenient for your Plants and poles, and so as it may shooke or put off any wet, or other annoyance, which shall fall upon it.

The composition of the
enriching of
hills.

Now these hills you shall not make intirely, all of one mould, but you shall take, as it were, a third part or better thereof, then another part of the earth which lyeth under dung-hills, and the last part of Sepe-ashes; and these three bodyes you shall mix equally together, and of them compound your Hop-hills: but if this seem somewhat difficult, and that you cannot find enough for your purpose of either of these manures, then you may take three parts of the natural earth, and but onely a fourth part of the other two, and therefore mix your Hop-hills, and it will be sufficient to afford you profit enough, provided you be able once in three or four years to renew it, for so long this will last in full strength and power.

Preparing of
the allies.

When you have thus made up your hills, you shall then pare up with a paring shovel all the green swarth quite through all your allies at least four fingers thick, and with the swarth so pared up, you shall cover all your hills almost to the top, turning the green swarth next unto the earth, so as it may rot, for that is an excellent manure also: then when your allies are all
 thus

thus cleansed of their swarth, you shall take good store of braken, or fern, and throw it all over quite thorow all the allies, so that it may lye in a good thickness, almost to the midst of the hills, which having all the Winter to rot in, will not only be an exceeding comfort to the hills, and preserve both them and their plants from many evils, but also being shovelled up together with the earth in the spring time, will be a marvellous strong manure wherewith to replenish the hills, and to make them to prosper exceedingly, and to save much other cost and charges as well in manure as in carriage.

When your hills are thus enriched, and your allies thus prepared, you shall then open your hills in the top, and set your plants, that is to say, in every hill four plants at the least, being well prepared; and this should be done in the month of *October*, and these plants must be set good and deep in the earth, and covered all over at the least four fingers thick: and if with the earth which covereth these plants you mix Ox-blood and Lime, it will not onely give great comfort and nourishment to the Plants, but also defend and save the roots from worms and other vermines, which otherwise would seek to destroy them.

The Planting
of Hopps.

After your Garden is thus planted over, you shall then let it rest till the following Spring, and about *April*, finding the small Twines of your Hopps issued out of the Hills and running alongst the ground, you shall then set up your Poles, which Poles, so they be long and streight, may be of any wood you please, as either Ash, Elme, Withy, Willow, or Sallow, and in the setting up of these poles, you shall have two very carefull respects: First, that in putting in of the poles, and fastening them with the earth, you do not hurt the Hop roots, which a small carelesnes may do, but be sure to set them cleer at the roots; and that you may do it the better, and make your poles to stand the faster, it is good that you have an iron auger, there with first to pierce the ground, and then to put the pole after, and so ram it in hard that it may not stir. The second care is, that you place not one pole to overshadow another, but that they may stand so cleer one from another, that which way soever the Sun shall cast his beames, yet every plant (as it winds about the

Poling of
Hopps.

the

the pole) may be an equall partaker of the same.

This, with a small observation in the setting up of the poles may easily be performed: the number of poles that you shall set on every hill, must be answerable to the Syens which shall issue from the roots, allowing to every pole two Syens at the least, and not above three at the most: these Syens (when your hills are poled) you shall with your hands twine about their several poles, and those which are but new peeping from the ground, you shall so fold among the other Branches, as they may of themselves run about the poles; and as these, so also all the other twigs, which are any way derived from the main Siens, leaving not any at all to run upon the ground; for that is altogether profitless, and to no use.

Of weeding
Hops.

For the weeding of this barren earth thus made into an Hop-Garden, there is little care to be had: for first, the soap ashes wherewith the hills are manured, the Ox blood and the Lime, are such enemies to all manner of weeds, that they will not suffer any to grow where they abide: Next, the Braken and Fern, which covereth the alleys, is such a poysoner and smotherer of any thing that shall grow underneath it, that it will not suffer any weed to peep or spring up through it; yet if in any especial place, where neither of these defences come, it happen that any weeds do grow, then you shall with your best care cut them away, or pull them up, and so your Garden shall remain comely, pleasant and fruitfull to every prospect.

CHAP. XXI.

A generall computation of men, and Cattels labours: what each may do without hurt daily.

Plowing and
Sowing.

TO speak generally of all Husbandly works, where the Country is tolerable, without any extraordinary difficulty, you shall understand, that a man may well in stiff grounds, plow an Acre, or an Acre and a half, and in light sand grounds two or three Acres with one Team in a day, and he may plough and sow in stiff ground two Acres and an half each day, and in light ground four at least with one Team; and always what he soweth, that he may harrow the same day also.

A man may well mow of good and deep loggy meadow, or of rough, uneven meadow, every day one acre; mowing clean and making a smooth board of well standing and good smooth meadow, an acre and a half each day: and of very thin and short grafs, or upland meadow, two acres at the least every day.

Also, he may mow of Corn, as Barley and Oats, if it be thick, Mowing.
loggy, and beaten down to the earth, making fair work, and not cutting off the heads of the ears, and leaving the straw still growing one acre and a half in a day: but if it be good, thick, and fair standing corn, then he may mow two acres, or two acres and half in a day; but if the corn be short, and thin, then he may mow three, and sometimes four Acres in a day, and not be overlaboured: Also of beans he may mow as much, and of pease mixt with beans, having a hook to follow him, no less; for they are works in this nature most easie, and least troublesome.

One man with a Binder may well reap an Acre of Wheat Reaping.
or Rye in a day, if it be principal good and well standing, but if laid or beaten down with weather, then three rood is fully sufficient for a dayes labour; but if it be thin and upright standing, then he may reap and bind five roods in a day: Of small pease, Fetches, and such like, a man may well reap two acres every day.

Now forasmuch as it is a custom in divers Countries (and Binding of
truly it is exceeding profitable and worthy imitation) to sheaf Barley and Oats.
and bind up both Barley and Oats, as well as Wheat or Rye, and that both saveth much Corn, and also makes it take a great deal less room, and that this labour is to be done after the mowers, as the other was after the reapers, by gathering the Barley, or Oats up without a sickle or hook, as it lyes in the swath, and so binding it in sheafs, you shall understand, that one man in a day shall bind as much as one mower can mow; and if the man be any thing skilful in the labour, two binders will bind as much as three mowers can mow.

For the gathering or inning of Grain, no man can proportion the number of loads, or quantity of ground, shall daily be Gathering in
brought home, sith the journeyes are uncertain, some going of Grain.

a mile, some half a mile; and some two mile : therefore it is the Husbandmans best way, the first day to go with his Team himself, and both to observe the labour and distance of place, and by that to compute what may be done after, without hurt to his cattel, and where he fails of any hope, there to make a strict account of the errour; for it is either ignorance or carelessness which brings forth mischances, speaking of husbandry, as over-throwing the Team, over-loading the Team, breaking necessary instruments, or not respecting the wayes and passages; any of which may in a day hinder more then half a dayes labour.

Ditching.

Again, a man may in a day ditch and quickset of a reasonable ditch four foot broad, and three foot deep, a rod or a pole a day; allowing sixteen feet to the rod, and so of large measure less ground, and of less ground larger measure according to the sufficiency of the fence which you purpose to make.

Hedging.

A man may hedge also in a day, if the hedge be good and substantial, that is to say, five foot high, well bound, thick stackt, and close laid, two rod in a day; and if the work be lower or thinner, then double so much more according to the former proportion.

Plashing.

For this plashing of hedges, or making a quick fence, if he do it workmanly, and that the growth be high and well grown, and then he lay it thick, close, and strongly bound in the top, turning the quick downward and inward, to plash a rod a day, is as much as any man can well do : but if he plash it after the west-country fashion, that is, onely cutting it down, and laying it along close to the ground, seeking only thicknes, and not much guard or comelines, then he may well plash a rod and a half a day without trouble : And sure in this work is great care and art to be used, as well for the preservation of the quick, as the goodness of the fence, being a thing of worth and validity to every Husbandman.

Delving.

Again, a man may delve or dig, as for Garden mould, Hemp-yard, Flax-yard, or for the setting of corn, or for levelling of uneven places, one rod in a day, and the ground so digged and delved, he may rake, dress, and level in the same day also : but if he dig it deep, and trench it, and manure it, as is meet, either

ther for Garden, Orchard, or Corn-setting, then to delve half a rood in a day, is a very great proportion, because ordinarily to delve, as to receive ordinary Seeds, requires but one spade graft in depth; but extraordinarily to delve, as for enriching and bettering of the ground, and to cleanse it from stones, weeds, and other annoyances, will require two spades graft at the least.

Lastly, a man may thrash if the Corn be good and clean, without some extraordinary abuse or poverty in the grain, in one day four Bushels of Wheat or Rye, six bushels of Barley or Oats, and five bushels of Beans or Pease: but then the Pulse must be imagined to be exceeding good, otherwise a man shall thrash less of it, than of any other kind of Grain; for as when it is well laden, it yieldeth plentifully, so when it is poor and lightly laden, it yieldeth little or nothing, and yet hath not one stroke less of the flail, nor any labour saved, more than belongs to the best pulse whatsoever, being ever at least three times turned, and four times beaten over.

Having thus generally run over (in a short computation) the labours of the Husbandman, I will now briefly as I can, go over the particular days labour of a Farmer or Plow-man, shewing the particular expence of every hour in the day, from his first rising, till his going to bed, as thus for example: we will suppose it to be after *Christmas*, and about plow-day (which is the first setting out of the Plow) and at what time men either begin to fallow, or to break up Pease-earth, which is to lie to bait, according to the custom of the Country; at this time the Plowman shall rise before four of the Clock in the morning, & after thanks given to God for his rest, and prayer for the success of his labours, he shall go into his stable, or beast-house, and first he shall fodder his Cattle, then cleanse the house, and make the booths clean, rub down the Cattle, and cleanse their skins from all filth; then he shall curry his Horses, rub them with cloaths and wipps, and make both them and the stable as clean as may be; then he shall water both his Oxen and Horses, & housing them again, give them more fodder, & to his Horse by all means Provender; as Chaff, and dry Pease or Beans, or Oat-hulls, Pease or Peans, or clean Oats, or clean Garbadge (which is the hinder ends of any Grain but Rye) with the straw chopt small amongst it, accord-

Thrashing.

The particular expence of a day.

ding as the ability of the Husbandman is.

And whilst they are eating their meat, he shall make ready his Collers, Hames, Treates, Halters, Mullens, and Plowgeares, seeing every thing fit, and in his due place, and to thase labours I will also allow full two hours, that is, from four of the clock till six; then he shall come in to breakfast, and to that I allow him half an hour, and then another half hour to the gearing and yoking of his Cattle, so that at seven of the clock he may set forward to his labour, and then he shall plough from seven of the Clock in the morning, till betwixt two and three in the afternoon; then he shall unyoke and bring home his Cattle, and having rubb'd them, drest them and cleansed away all dirt and filth, he shall fodder them, and give them meat; then shall the servants go in to their dinner, which allowed half an hour, it will then be towards four of the clock, at which time he shall go to his Cattle again, and rubbing them down, and cleansing their stalls, give them more fodder: which done, he shall go into the Barn, and provide and make ready fodder of all kinds for the next day, whether it be hay, straw, or blend-fodder, according to the ability of the Husbandman.

This being done, and carried into the stable, Oxe-house, or other convenient place, he shall then go water his Cattle, and give them more meat, and to his Horse-Provender, as before is shewed: and by this time it will draw past six of the Clock, at which time he shall come in to supper, and after supper, he shall either by the fire side mend his shooes both for himself and their Family, or beat, or knock Hemp, or Flax, or pick and stamp Apples or Crabs, for Cyder or Verjuyce, or else grind Malt on the Quernes, pick Candle-rushes, or do some Husbandly office within doors till it be full eight a Clock: Then shall he take his Lanthorn and Candle, and go see his Cattle, and having cleansed the stall and planks, litter them down; look that they be safely tied, and then fodder, and give them meat for all night; then giving God thanks for benefits received that day, let him and the whole household go to their rest till the next morning.

Now it is to be intended, that there may be in the Household

hold more servants than one : and so you will demand of me what the rest of the servants shall be imployed in, before and after the time of plowing. To this I answer, that they may either go into the Barn and thrash, fill or empty the Malt fat, load or unload the Kilne, or any other good and necessary work that is about the yard ; and after they come from plowing, some may go into the Barn and thrash, some hedge, ditch, stop gaps in broken Fences, dig in the Orchard or Garden, or any other Out-work, which is needful to be done, and which about the Husbandman is never wanting, especially one must have a care every night to look to the mending or sharpening of the Plough-irons, and the repairing of the Plough and Plough-gears, if any be out of order ; for to defer them till the morrow, were the loss of a days work, and an ill point of Husbandry.

Now for the particular labours of Cattle, though it be already inclusively spoken of in that which is gone before, where I shew you how much a man may conveniently plough in a day with one Team or Draught of Cattle, yet for further satisfaction, you shall understand, that in your Cattle there are many things to be observed, as the kind, the number, and the Soil they labour in. For the kind, which are Oxen, Bulls, or Horses ; the best for the draught are Oxen, and the reason I have shewed in my former Works : The next are Horses, and the worst, Bulls, because they are most troublesome : the number fit for the Plough, is eight, six or four ; for the Cart, five or four ; and for the Waine, never under six, except in leading home of Harvest, where loading easily, four very good Oxen are sufficient ; for the Soil, if it be in the toughest and deepest earth, eight Beasts can do no more but fallow or break up Pease earth ; no, nor fewer stir, if the season grow hard and dry ; for sowing, Winter rigging and Seed furrow, six Beasts may dispatch that labour : if the Soil be mix'd and half-fel, then six may fallow and sow Pease, and four do every other ordure : but if it be light and easie Sand, then four is enough in every season. For the quantity of their work, an Oxe-plough may not do so much as a Horse-plough, because they are not so swift, nor may be driven out of their pace, be-

Particular labours of Cattle.

ing more apt to surfeit than Horses be, so that for an Ox-plough to do an Acre, and an Horse-plow an Acre and a Rood, or an Acre and a half in good ground, is work fully sufficient.

CHAP. XXII.

The applying of Husbandry to the several Counties of this Kingdom, wherein is shewed the Office and Duty of the Carter or Plow-man.

IT is to be understood, that Husbandry doth vary according to the Nature and Climates of Countries: not one rule observed in all places, but according as the Earth, the Air, the much or little heat, moisture or cold doth increase or diminish, so must the skilful Husbandman alter his seasons, labours and instruments; for in stiff Clays, as are all the fruitful Vales of this Kingdom (of which I have named most part in a Chapter before) as also *Huntington-shire*, *Beafor-shire*, *Cambridge-shire*, and many other of like nature; all manner of arable work must be begun betimes in the year, and the Ploughs and Instruments must be of large size, and strong timber, and the labour great and painful: so also in mixt soils, that are good and fruitful, as *Northampton-shire*, *Hartford-shire*, most part of *Kent*, *Essex*, *Bark-shire*, and Counties of like nature; all arable toils would begin at latter seasons, and the Ploughs and Instruments would be of middle size, and indifferent timbers, and the labour somewhat less than the other; but the light sandy grounds which have also a certain natural fruitfulness in them; as in *Norfolk*, *Suffolk*, most part of *Lincoln-shire*, *Hampshire*, *Surry*, and Counties of that nature, all arable toils would begin at the latest seasons, and the Ploughs and Instruments would be of the smallest and lightest size, and of the least timber, and the labour of all the other is easiest.

Lastly, for the barren unfruitful earth (of which only I have written in this (as in *Devonshire*, *Cornwal*, many parts of *Wates*, *Derbyshire*, *Lancashire*, *Cheshire*, *York-shire*, and many other like, or worse than they: the arable toils would have a fit season of the year, according to the temperateness of the year, which if it happen early, then you must begin your labours at latter

ter season, and for your Plough and Instruments, they must not keep any certain proportion, but be framed ever according to the ground, the stronger and stiffer ground having ever the strong and large Plough, with Instruments of like kind, and the lighter earth a Plow and Instruments of more easie substance; as for the labour, it must be such, and no other, than that which hath been already declared in this Book.

And hence it comes, that the office and duty of every skilful Plow-man, or Carter, is, first to look to the nature of the earth, next to the seasons of the year, then to the customs and fashions of the place wherein he liveth; which customs, although they be held as second natures amongst us, and that the best reasons of the best work-men commonly are, that thus I do, because thus they do; yet would I wish no man to bind himself more strictly to custom, than the discourse of reason shall be his warrant, and as I would not have him to prejudicate in his own opinion, so I would not have him too great a slave to other mens tradition, but standing upon the ground of reason, made good by experience, I would ever have him profit in his own judgment.

Now the further office and duty of the Husbandman, is, with The Carter's great care and diligence, to respect in what sort fashion to office. plough his ground: for although I have in the former Chapter shewed how he should lay his furrows, what depth he shall plow them, and how he shall be able to raise and gain the greatest store of mould; yet is there also another consideration to be had, no less profitable to the Husbandman than any of the former; and that is, how to lay your Land best for your own profit and ease, as also the ease of your Cattle which shall draw within your draught, as thus for instance: If your arable Land shall lie against the side of any steep hill (as for the most part all barren earths do) if then you shall plow such Land directly against the hill, beginning below, and so ascending streight upright, and so down-again, and up again, this very labour and toyling against the hill will breed such a bitter wearisomness to the cattle, and such a discouragement, that you shall not be able to compass one half part of your labour, besides the danger of over-heating and surfeiting of your beasts, whence will spring many

many mortal diseases : Therefore when you shall plough any such ground, be sure to plough it side-ways over-thwart the hill, where your Beasts may tread on the level ground, and never directly up and down, so shall the Compost and Manure which you lay upon the ground not be so soon wash'd away from the upper-part of the ground, because the furrows not lying streight down in an even descent, but turned cross-ways upward against the hill, it must necessarily hold the Soil within it, and not let it wash away.

Of Cattle for draught.

Again, it is the office of every good Plow-man to know what Cattle are meetest for his draught, as whether Oxen or Horse, or both Oxen and Horse : wherein is to be understood, that although of all draughts whatsoever within this Kingdom, there is none so good to plough withal, both in respect of the strength, stability, indurance, and fitness for labour, as the Oxen are, in whom there is seldom or never any loss ; because whensoever his service faileth in the draught, his flesh will be of good price in the shambles; yet notwithstanding in this case a man must necessarily bind himself much to the custom of the Country, and fashion of his neighbours ; for if you shall live in a place where fuel is scarce and far to be fetch'd, as commonly it is in all barren Countries, which for the most part are stony Champains, or cold Mountains ; and your Neighbours, as well for the speed of their Journeys, as for length, keep Horse-draughts ; in this case also you must do the like, or else you shall want their company in your Journey, which is both discomfort and disprofit, if any mischance or casualty shall happen ; or being inforc'd to drive your Oxen as fast as they do their Horse, you shall not only over-heat, tire, bruise, and spoil them, but also make them utterly unfit either for feeding or labour ; and therefore if your Estate be mean, and that you have no more but what necessity requires, then you shall fort your Plow or Team according to the fashion of your Country, and the use of your neighbours : but if God have blest you with plenty, then it shall not be amiss for you to have ever an Oxe-draught or two to till your Land ; and a Horse-draught to do all your forraign abroad businesses : so shall your work at home ever go constantly forward, and your outward necessary Provisions be never wanting. Now
for

for the mixture of Oxen and Horses together, it falleth out oftentimes that the Plow-man of force must be provided with Cattle of both kind, as if he happen to live in a rocky Country, where the steepness of the Hills, and narrowness of the ways, will neither suffer Cart, Wain, nor Tumbrel to pass; in this case you shall keep Oxen for the Plow to till the ground with, and Horses to carry pots and hooks: the first to carry forth your manure, and the other to bring home your Hay and Corn-harvest, your fuel and other provisions, which are needful for your family, as they do both in *Cornwal*, and other mountainous Countries, where Carts and Wains, and such like draught, have no possible passage.

Again, it is the office and duty of every good Plow-man to know his several labours, for every several month through the whole year, whereby no day nor hour may be mispent, but every time and season employed according as his nature requirerth: as thus for example.

In the Month of *January*, the painful Plow-man, if he live in fertile and good Soyls, as among rich, simple Clays, he shall first plow up his Pease earth, because it must lie to take bait before it be sown; but if he live in fruitful, well mixt Soyls, then in this month he shall begin to fallow the field he will lay to rest the year following: but if he live upon hard barren earths (of which chiefly I write) then in this month he shall water his meadows & pasture grounds, and he shall drain and make dry his arable grounds, especially where he intends to sowe Pease, Oats, or Barley the Seed-time following. Also he shall stub up all such rough grounds, as he intends to sowe the year following. You shall measure and trim up your Garden moulds, and you shall comfort with manure, sand, or lime, or all three mixt together, the Roots of all barren Fruit-trees; and also cut down all such Timber, only there will be loss in the Bark, for the time is somewhat too early for it to rise. Lastly, you may transplant all manner of Fruit-trees, the weather being open, and the ground easie; you may rear Calves, remove Bees, and for your own health keep your body warm, let good diet and wholesome be your Physician, and rather with exercise than sawce encrease your appetite.

February

In the month of *February*, either set or sowe all sorts of Beans, Pease, and other Pulse, and the stiffer your ground is, the sooner begin your work; prepare your Garden-mould, and make it easie and tender; prune and trim all sorts of Fruit-trees, from moss, cankers, and all superfluous branches; plash your hedges, and lay your quick-fets close and intire together; plant Roses, Gooseberries, and any fruit that grows upon little bushes; graft at the latter end of this month upon young and tender stocks, but by all means overlade not the stocks.

March.

Lastly, for your health, take heed of cold, forbear meats that are slimy and phlegmatick, and if need require, either purge, bathe, or bleed, as Art shall direct you.

In the month of *March*, make an end of sowing of all sorts of small Pulse, and begin to sowe Oats, Barley, and Rye, which is called *March-Rye*; graft all sorts of Fruit-trees, and with young Plants and Syens replenish your Nursery; cover the roots of all trees that are bared, and with fat earth lay them close and warm: if any Tree do grow barren, bore holes in the Root, and drive hard wedges or pins of Oak-wood therein, and that will bring fruitfulness; transplant all sorts of Summer-flowers, and give new comfort of manure and earth to all early Out-landish flowers, especially to the *Crown Imperial Tulips*, *Hyacinth*, and *Narcissus* of all shapes and colours; cut down under-wood for fuel and fencing, and look well to your Ewes, for then is the principal time of yearning.

And lastly, bathe often, and bleed but upon extremity, purge not without good counsell, and let your diet be cool and temperate.

April.

In the month of *April*, finish up all your Barley-seed, and begin to sowe your Hemp and Flax: sowe your Garden-seeds, and plant all sorts of Herbs; finish grafting in the stock, but begin your principal inoculation, for then the Rind is most pliant and gentle; open your Hives, and give Bees free liberty, and leave to succour them with food, and let them labour for their living.

Now cut down all great Oak-timber, for now the bark will rise, and be in season for the Tanners; now scour your ditches, and gather such manure as you make in the streets and highways, into great heaps together; lay your meadows, sleight your corn-

corn-ground, gather away stones, repair your high-wayes, Set Oziers and Willows, and cast up the banks and mines of all decayed fences.

Lastly, for your health, either purge, bathe, or bleed, as you shall have occasion, and use all wholesome recreation : for than moderate exercise in this month, there is no better Physick.

In the month of *May*, sow Barley upon all light sands and May. burning grounds, so likewise do your Hemp, or Flax, and also all sorts of tender garden seeds, as are Cucumbers, and Melons, and all kind of sweet smelling herbs and flowers ; Fallow your stiff clayes, summer stir your mixt earth, and soyl all light and loose hot sands ; prepare all barren earth for Wheat and Rye, burn bait, stub Gorse or Furs, and root out Broom and Fern ; begin to fold your sheep, lead forth manure, and bring home fuell and fencing ; weed your winter corn, follow your common works, and put all sorts of grasse either in pasture or teather ; put your Mares to the Horse, let nothing be wanting to furnish the Dairy ; and now put off all your Winter fed Cattel, for now they are scarcest and dearest ; put young steers and dry kine now to feed at fresh grasse, and away with all pease-fed sheep ; for the sweetness of grasse mutton will pull down their prices.

Lastly, for your health, use drink that will cool and purge the blood, and all other such physical precepts, as true Art shall prescribe you : but beware of Mountebanks, and old wives tales, the latter hath no ground, and the other no truth, but apparent coulenage.

In the month of *June*, carry sand, marle, lime, and manure of June. what kind soever to your land ; bring home your coals and other necessary fuel fetch far off ; shear early fat sheep, sow all sorts of tender herbs, cut rank low meadows, make the first return of your fat cattel, gather early summer fruits, distill all sorts of plants and herbs whatsoever.

And lastly, for your health, use much exercise, thin dyet, and chaste thoughts.

In the month of *July*, apply your hay harvest ; for a day July. backt is many pounds lost ; chiefly, when the weather is unconstant,

stant, shear all manner of field-sheep, Summer-stir rich stiff grounds, soyl all mixt earths, and latter soyl all loose hot sands. Let herbs you would preserve, now run to seed; cut off the stalks of out-landish-flowers, and cover the roots with new earth, so well mixt with manure as may be; sell all such Lambs as you feed for the butcher, and still lead forth sand, marl, lime, and other manure; fence up your copses, graze your elder under-woods, and bring home all your field-timber.

And lastly, for your health, abstain from all physick, bleed not but upon violent occasion, and neither meddle with Wine, Women, nor no other wantonness.

August.

In the Month of *August*, apply your Corn Harvelt, shear down your Wheat and Rye, mow your Barley and Oats, and make the second return of your fat sheep and cattle; gather all your Summer greater fruit, Plums, Apples, and Pears; in Summer make your sweet Perry, and Cyder; Set slips, and syces of all sorts of Gilly-flowers, and other flowers, and transplant them that were set the Spring before, and at the end of this month begin to winter-rig all fruitful soyls whatsoever. Geld your lambs, carry manure from your dove-coats, and put your swine to the early or first mast. And lastly, for your health, shun feasts and banquets. Let Physick alone, hate wine, and onely take delight in drinks that are cool and temperate.

September.

In the month of *September*, reap your pease, beans, and all other pulse, making a final end of your harvest; now bestow upon your wheat Land your principal manure, and now sow your Wheat and Rye, both in rich and in barren climates; now put your swine to mast, of all hands, gather your winter fruit, and make sale of your wooll, and other summer commodities; now put off those stocks of bees, you mean to sell, or take for your own use, close thatch and daub warm all the surviving hives, and look that no Drone, Mice, or other Vermine be in or about them; now thatch your stacks and reeks, thrash your seed Rye and Wheat, and make an end with your cart of all forraign journeyes.

Lastly, for your health, in this month, use Physick, but moderately; forbear fruits that are too pleasant or rotten, and, as death, shun ryot and surfeit.

In

In the month of *October*, finish your wheat-feed, and scour October.
ditches and ponds, plash and lay hedges and quickset, transplant,
remove or Set all manner of fruit-trees, of what nature or quality
soever; make your Winter Cider and Perry, spare your private
pastures, and eat up your corn-fields and Commons; and now
make an end of winter ridging, draw furrows to drain, and keep
dry your new sown corn; follow hard the making of your malt,
rear all such calves as shall fall, and wean those foals from your
draught mares, which the Spring before were foaled: now sell all
such sheep as you will not winter, give over folding, and separate
Lambs from the Ewes, which you purpose to keep for your own
flock.

Lastly, for your health, refuse not any needfull Physick at the
hands of the learned Physitian, use all moderate sports, for any
thing now is good, which reviveth the spirits.

In the month of *November*, you may sow either Wheat or Rye November.
in exceeding hot soyls, you may then remove all sorts of fruit-
trees, and plant great trees either for shelter or shadow: now cut
down all sorts of Timber, for plows, carts, axeltrees, naves, har-
rows, and other husbandly offices; make now the last return of
your grasse fed cattle, bring your swine from the mast, and feed
them for slaughter, rear what calves soever fall, and break up all
such Hemp and Flax, as you intend to spin in the winter sea-
son.

Lastly, for your health, eat good wholesome and strong meats,
very well spiced and drest, free from rawness; drink sweet wines,
and for digestion ever before cheefe, prefer good and moderate
exercise.

In the Month of *December*, put your sheep and swine to the December.
perle Reeks, and fat them for the slaughter and market; now
kill your small porks, and large bacons, lop hedges and trees,
saw out your timber for building, and lay it to season; and if
your land be exceeding stiff, and rise up in an extraordinary fur-
row, then in this month begin to plow up that ground whereon
you mean to sow clean beans only; now cover your dainty fruit
trees over with canvanse, and hide all your best flowers from frost
and stormes, with rotten old horse-litter; now drain all your
corn-fields, and as occasion shall serve, so water and keep moist

your meadows; now become the fowler, with Piece, Nets, and all manner of Engines, for in this month no fowl is out of season; now fish for the Carp, the Bream, Pike, Tench, Barbel, Peal and Salmon.

And lastly, for your health, eat meats that are hot and nourishing, drink good wine that is neat, sprightly and lusty, keep thy body well clad, and thy house warm, forsake whatsoever is flegmatick, and banish all care from thy heart, for nothing is more unwholesome then a troubled spirit.

Many other observations belong unto the office of our skillful Plow-man or Farmer; but since, they may be imagined too curious, too needles, or too tedious, I will stay my pen with these already rehearsed, and think to have written sufficiently, touching the application of grounds, and office of the Plow-man.

The End of Markham's Farewell to Husbandry.

The

The Table.



The Table and general Contents of the whole Book.

CHAP. I.		<i>Sowing of Salt.</i>	p. 13.
T HE Nature of Grounds in general pag. 1		<i>The excellency of salt.</i>	ib.
		<i>Of steeping seed in brine.</i>	p. 13.
<i>The knowledge of barren grounds.</i>		CHAP. III.	
	p. 2.	<i>Of the ordering, tilling, and dressing of all rough barren clay, simple or compound, being over-run with Gorse, Broom, or, &c.</i>	p. 14.
CHAP. II.		<i>The destroying of weeds.</i>	p. 16.
<i>The Ordering, Tilling, and Dressing of all barren clays, simple or compound.</i>		<i>Burning of Bait.</i>	ib.
	p. 3.	<i>The breaking of the burnt earth.</i>	ibid.
<i>The first enriching of barren grounds.</i>		<i>The causes of unfruitfulness.</i>	17.
	p. 3.	<i>An excellent manure.</i>	ib.
<i>The manner of plowing.</i>		<i>The plowing.</i>	ib.
<i>The hacking, sanding, and liming of grounds</i>		<i>Of divers manures.</i>	18.
	p. 4, 5.	<i>Of weeding.</i>	ib.
<i>Additions. The use and profit of lime.</i>		<i>The time of Weeding.</i>	ib.
	p. 5.	<i>The gathering of stones.</i>	p. 9.
<i>The manuring of grounds.</i>		CHAP. IV.	
	p. 6.	<i>Of the ordering, tilling, and dressing of barren clays, that are over-run with Whins.</i>	p. 20.
<i>The times for all labours.</i>		<i>What whins are.</i>	ib.
	p. 6.	<i>Paring of grounds.</i>	p. 21.
<i>The second plowing.</i>		<i>Making of Baits.</i>	ib.
	p. 7.	<i>Breaking of Baits.</i>	p. 22.
<i>The second hacking.</i>		<i>Plowing.</i>	ib.
	p. 7.		Hgr.
<i>The first harrowing.</i>			
	p. 7.		
<i>Of sowing the seed.</i>			
	p. 8.		
<i>The second harrowing.</i>			
	ib.		
<i>Faults in the earth.</i>			
	ib.		
<i>The clotting of grounds.</i>			
	p. 9.		
<i>Another manner of clotting.</i>			
	p. 10.		
<i>Weeding.</i>			
	p. 11.		
<i>An objection and answer.</i>			
	p. 12.		
<i>The ordering of earths where sand wants.</i>			
	ib.		

The Table.

Harrowing, weedibg, & the profits	p. 24	Of Manures.	p. 39.
CHAP. V.		Of harrowing, and other labours.	ib.
Of ordering, tilling, and dressing all barren clays which are over-run with Ling and Heath.	p. 24.	Of weeding.	p. 40.
Destroying of Heath.	p. 25.	CHAP. IX.	
Another burning of bait.	p. 26.	The plowing, tilling, and ordering of sands, laden with moorish sinking grass.	p. 41.
Of weeding.	p. 27.	Grounds for fish-ponds.	p. 42.
CHAP. VI.		The draining of wet grounds.	p. 43.
Of the ordering, trimming, and dressing of all barren Sands, bearing nothing but mossie grass	p. 28.	The harrowing.	p. 44.
Of Plowing.	p. 30.	The weeding.	p. 45.
Of Marling.	p. 31.	Additions. CHAP. X.	
What Marl is.	ib.	A general way for the enriching of any arable grounds, either Clay or Sand, with less charge than formerly.	p. 45.
Additions.	ib.	Steeping of Seed-corn, or any Pulse	p. 46.
Of Chalk and the use.	p. 33.	Shavings of horn	ib.
The profit.	p. 35.	Hoofs of Cattel.	ib.
CHAP. VII.		Of Woad.	p. 47.
Of the plowing, tilling, and dressing of all barren Sands, that are over-run with Braken, Fern, or Heath.	p. 35.	The enriching of ordinary Manure.	ib.
Of sanding and liming.	p. 36.	Additions. CHAP. XI.	
Of plowing and sowing.	p. 37.	How to enrich for corn any barren rough woody ground, being newly stubbed up.	p. 48.
Labours after sowing.	ib.	Additions. CHAP. XII.	
Of weeding.	p. 38.	The manner of reducing, and bringing unto their first perfection, all sorts of Grounds which have been over-flowed or spayled by salt-water, or Seabreach, either arable, or pasture, as also the enriching or bet.	
CHAP. VIII.			
The plowing, tilling, and ordering of all barren Sands, laden with twitch, and wild Broyar.	p. 38.		
The destroying of twitch and bryar.	ib.		

The Table.

bettering of the same. p. 50.

Additions. CHAP. XIII.

Another way to enrich barren pasture, or meadow, without the help of water. p. 57.

CHAP. XIV.

How to enrich or make the most barren soyl to bear excellent good pasture or meadow. p. 62.

Of watering grounds. p. 64.

The helps in watering. ib.

When and how to water. ib.

The best season for watering p. 65.

CHAP. XV.

The enriching barren grounds, for Hemp or Flax. p. 66.

Black clay for Hemp. p. 67.

The making ill earth bear Hemp. p. 68.

The weeding. p. 69.

CHAP. XVI.

The manner of stacking all kind of Grain with least loss, 70.

CHAP. XVII.

The diseases and imperfections which happen to all manner of Grain. p. 72.

Crows, Pidgeons, or Birds, and the Cure. p. 73.

Additions. p. 74.

Of Pismires and Doves, with the Cure. p. 75, 76.

Of field Rats and Mice, and the Cure. p. 77.

Of worms and the cure. p. 78.

Of Rye not to be wet. ib.

Of Snails p. 79.

Of Grasshoppers. ib.

Of Moles, and the cure p. 80.

Offences from the influence of Heaven. p. 81.

Of smuttness or mildew, and the Cure. ib.

Additions. ib.

Of Hail and the cure. ib.

Of Lightning, Frosts, Mists, Fogs and blastings, and the cure 82, 83.

Corn reapt wet, and the cure. 83.

Of washt corn. p. 83.

To know washt corn. p. 84.

CHAP. XVIII.

How to keep all manner of Grain thrasht or unthrasht the longest time, and how to preserve it, &c. p. 86.

Of Garners. p. 87.

Of Hutches and their uses p. 88.

To preserve Wheat. p. 89.

To preserve Rye. p. 93.

To preserve Beans. ib.

To preserve Pease or Fitches. 95.

To preserve Lentils or Lupins. 98.

To preserve Oats. ib.

To preserve Oat-meal. p. 99.

To preserve any meal. p. 100.

The preserving of all small seeds. p. 101.

CHAP. XIX.

How to keep Grain either for transportation, or, &c. p. 101.

The use of Grain. p. 102.

Of Pulse. ib.

Of Rice and the use ib.

Of

The Table.

<i>Of Wheat, and the use.</i>	p. 103.	CHAP. XXI.
<i>Of Oat-meal, and the use.</i>	p. 104.	<i>A general computation of men & cattels labours, &c.</i>
<i>Of Barley, and the use.</i>	p. 105.	p. 123.
<i>Of Buck, and the use.</i>	ib.	<i>Of Plowing, Sowing, and Mowing</i>
<i>Of Pulse, and the use.</i>	p. 106.	ib.
<i>Of French-beans.</i>	ib.	<i>Of Reaping and gathering Grain.</i>
<i>Of the Kidney-bean.</i>	ib.	p. 113.
<i>Of common field beans.</i>	ib.	<i>Of Ditching, Hedging, Plashing</i>
<i>Of Pease, and their use.</i>	ib.	p. 114.
<i>Several sorts of pease,</i>	p. 107.	<i>Of Delving and thrashing.</i>
<i>To transport Grain.</i>	ib.	<i>The particular expences of a Day.</i>
Additions. CHAP. XX.		ib.
<i>The enriching of barren Grounds, and to make it fruitfull to bear Hopps.</i>	p. 109.	CHAP. XXII.
<i>Abating and encreasing of fertility.</i>	ib.	<i>The applying of Husbandry to the several Countries.</i>
<i>Choice of grounds.</i>	ib.	p. 118.
<i>Casting the hills.</i>	p. 110.	<i>The Carters office.</i>
<i>Preparing the Allies, and Planting the Hopps.</i>	ib.	p. 119.
		<i>Of Cattel for the Draught.</i>
		<i>The several labours of the several Months.</i>
		p. 121. to 126.

ADDITION.

An Excellent way to take Moles, and to preserve good Ground from such Annoyance.

Put Garlick, Onions, or Leeks, into the mouths of the holes, and they will come out quickly, as amazed.

FINIS.

A NEW Orchard & Garden:

O R,

The best way for PLANTING, GRAFFING, and to make any Ground good for a Rich Orchard: Particularly in the North, and Generally for the whole Common-wealth, as in Nature Reason, Situation, and all Probability, may and doth appear.

With the Country House-wifes Garden for Herbs of Common use. Their Virtues, Seasons, Profits, Ornaments, Variety of Knots, Models for Trees, and Plots, for the best Ordering of Grounds and Walks.

AS ALSO

The Husbandry of Bees, with their severall Uses and Annoyances: All being the Experience of Forty and eight Years Labcur; And now the Sixth time Corrected, and much Enlarged, By William Lawfon.

Whereunto is newly added the Art of Propagating Plants, with the true Ordering of all manner of Fruits, in their Gathering, Carrying home, and Preservation.

Skil and Pains, bring fruitful gains.



Nemo sibi natus.

London, Printed for George Sawbridge, at the Sign of the Bible
on Ludgate-Hill. 1676.

Orchard & Garden:

The way for planting, grafting, and
the best way to grow them in the
best manner possible.

By John G.
... ..


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To the Right Worshipful
Sir HENRY BELLOSES,
Knight and Baronet.

Worthy Sir,

HEN in many years by long Experience I had furnished this my Northern Orchard and Country-Garden with needful Plants and useful Herbs, I did impart the view thereof to my Friends, who resorted to me to confer in matters of that nature; they did see it, and seeing it, desired it; and I must not deny now the publishing of it, (which then I allotted to my private delight) for the publick profit of others. Wherefore, though I could plead Custom, the ordinary excuse of all Writers, to chuse a Patron and Protector of their Works, and so shroud my self from scandal under your honourable favour,

yet have I certain reasons to excuse this my presumption: First, the many courtesies you have vouchsafed me. Secondly, your delightful skill in matters of this nature. Thirdly, the profit which I received from your Learned Discourse of Fruit-Trees. Fourthly, your animating and assisting of others to such endeavors. Last of all, the rare Work of your own in this kind; all which to publish under your protection, I have adventured (as you see.) Vouchsafe it therefore entertainment, I pray you, and I hope you shall find it not the unprofitablest Servant of your Retinue; for when your Serious Employments are over-passed, it may interpose some commodity, and raise you contentment out of variety.

Your Worships

most Bounden,

WILLIAM LAWSON.

The Preface,

To all Well-minded.

ART hath made her first Original out of Experience, which therefore is called The School-Mistriss of Fools, because she teacheth infallibly, and plainly, as drawing her knowledge out of the course of Nature, (which never fails in the general) by the senses, feelingly apprehending, and comparing, (with the help of the Mind) the Works of Nature; and as in all other things natural, so especially in Trees. For what is Art more than a provident and skilful Correctrix of the faults of Nature in particular works, apprehended by the Senses? As when good ground naturally brings forth Thistles, Trees stand too thick, or too thin, or disorderly, or (without dressing) put forth unprofitable Suckers, and such like; all which, and a thousand more, Art reformeth, being taught by Experience; and therefore must we count that Art the surest, that stands upon Experimental Rules, gathered by the Rule of Reason, (not Conceit) of all other Rules the surest.

Whereupon have I, of my meer and sole Experience, without respect, to any former written Treatise, gathered these Rules, and set them down in writing, not daring to hide the least Talent given me of my Lord and Master in Heaven. Neither is this injurious to any, though it differ from the Common opinion in divers points, to make it known to others, what good I have found out, in this faculty by long tryal and experience. I confess freely my want of Curious Skill in the Art of Planting: and I admire and praise Pliny, Aristotle, Virgil, Cicero, and many others for wit
and

The Preface.

and judgment in this kind, and leave them to their times, manner, and several Countries.

I am not determined (neither can I worthily) to set forth the praises of this Art ; how some, and not a few, even of the best, have accounted it a chief part of earthly happiness, to have fair and pleasant Orchards, as in Hesperia and Thessaly ; how all with one consent agree, That it is a chief part of Husbandry, (as Tully de Senectute) and Husbandry maintains the World: how ancient, how profitable, how pleasant it is ; how many Secrets of Nature it doth contain, how loved, how much practised in the best places, and of the best. This hath been done by many: I only aim at the common good. I delight not in curious Conceits, as planting and grafting with the Roots upwards, inoculating Roses on Thorns, and such like ; although I have heard of divers, proved some, and read of more.

The Stationer hath (as being most desirous with me, to further the common good) bestowed much cost and care in having the Knots and Models by the best Artizan cut in great variety, that nothing might be any way wanting to satisfy the Curious desire of those that would make use of this Book.

And I shew a plain and sure way of Planting, which I have found good by 48 Years (and more) experience in the North part of England. I prejudicate and envy none ; wishing yet all to abstain from maligning that good (to them unknown) which is well intended. Farewell.

Thine for thy good,

W. L.

The



*The best, sure, and readiest way to make a
good Orchard and Garden.*

CHAP. I.

Of the Gardener, and his Wages.



Hosoever desireth and endeavoureth to have a Religious:
Pleasant and Profitable Orchard, must (if he be
able) provide himself of a Fruiterer, Religious,
Honelt, Skilful in that Faculty, and therewithal
Painful. By Religious, I mean (because many
think Religion but a Fashion or Custom to go
to Church) maintaining, and cherishing things Religious: as
Schools of Learning, Churches, Tythes, Church Goods and
Rights, and above all things, God's Word, and the Preachers
thereof, so much as he is able, practising Prayers, comfortable
Conferences, mutual Instruction to edifie, Alms, and other
Works of Charity, and all out of a good Conscience.

Honesty in a Gardener, will grace your Garden, and all your Honest.
house, and help to stay unbridled Serving-men, giving offence to
none, nor calling your Name into Question by dishonest acts, nor
infecting your Family by evil counsel or example. For there is no
Plague so infectious as Popery and Knavery; he will not pur-
loin your profit, nor hinder your pleasures.

Concerning his Skill, he must not be a Sciolist, to make a shew Skilful.
or take in hand that which he cannot perform, especially in so
weighty a thing as an Orchard: than the which there can be no
humane thing more excellent, either for pleasure or profit, as
shall (God willing) be proved in the Treatise following. And
what an hindrance shall it be, not onely to the Owner, but to
the common good, that the unspeakable benefit of many hundred
years.

years shall be lost, by the audacious attempt of an unskilful Arborist?

Painful.

The *Gardener* had not need be an idle or lazy Lubber, for so your *Orchard*, being a matter of such moment, will not prosper, there will ever be something to do. Weeds are alwaies growing, the great Mother of all living Creatures, the Earth, is full of seed in her Bowels, and any stirring gives them heat of Sun, and being laid near day, they grow: Moles work daily, though not alwaies alike: Winter Herbs at all times will grow (except in extream Frost). In Winter your Trees and Herbs would be lightned of Snow, and your Allies cleansed: drifts of Snow will set Deer, Hares and Conies, and other noysome Beasts, over your Walls and Hedges into your *Orchard*. When Summer cloaths your Borders with Green and speckled colours, your *Gardener* must dress his hedges, and antick works; watch his Bees, and hive them: Distil his Roses and other Herbs. Now begin Summer Fruits to ripen, and crave your hand to pull them. If he have a *Garden* (as he must needs) to keep, you must needs allow him good help, to end his labours which are endless; for no one man is sufficient for these things.

Wages.

Such a *Gardener* as will conscionably, quietly and patiently travel in your *Orchard*, God shall Crown the labours of his hands with joyfulness, and make the Clouds drop fatness upon your Trees; he will provoke your love, and earn his wages and fees belonging to his place. The house being served, fallen fruit, superfluity of Herbs and Flowers, Seed, Grasses, Sets, and besides all other of that Fruit which your bountiful hand shall reward him withal, will much augment his wages, and the profit of your Bees will pay you back again.

If you be not able, nor willing to hire a *Gardener*, keep your profits to your self, but then you must take all the pains; and for that purpose (if you want this faculty) to instruct you, have I undertaken these Labours, and gathered these Rules, but chiefly respecting my Countries good.

CHAP. II.

Of the Soyl.

FRUIT-Trees most common, and meetest for our *Northern* Countries: (as Apples, Pears, Cherries, Filbirds Red and White, Plums, Damsons, Bullis,) for we meddle not with Apricocks nor Peaches, nor scarcely with Quinces, which will not like in our cold parts, unless they be helped with some reflect of the Sun or other like means, nor with bushes bearing berries, as Barberries, Goose-berries or Grosers, Raspe-berries, and such like, though the Barberry be wholesome, and the Tree may be made great; do require (as all other Trees do) a black, fat, mellow, clean and well tempered soyl, wherein they may gather plenty of good *Kinds of trees.* sap. Some think the Hasel would have a chanily rock, and the Sallow, and Elder, a waterish marish. The soyl is made better by delving, and other means, being well melted, and the wildness of the earth and weeds (for every thing subject to man, and serving his use, (not well ordered) is by Nature subject to the curse,) is killed by frost and drought, by fallowing and laying on heaps; and if it be wild Earth, with burning. *Soyl.*

If your ground be barren (for some are forced to make an *Or-* *Barren Earth.* *chard* of barren ground) make a pit three quarters deep, and two yards wide, and round in such places where you would set your Trees, and fill the same with fat, pure, and mellow Earth, one whole foot higher than your soyl, and therein set your plant. For who is able to manure a whole *Orchard* plot, if it be barren? But if you determine to manure the whole Site, this is your way; dig a trench half a yard deep, all along the lower, (if there be a lower side of your *Orchard* plot) casting up all the Earth on the inner side, and fill the same with good, short, hot and tender muck; and make such another trench, and fill the same as the first, and so the third, and so throughout your ground; and by this means your plot shall be fertile for your life. But be sure you set your Trees neither in dung, nor barren Earth.

Your ground must be plain, that it may receive, and keep *Plain.* moisture, not onely the rain falling thereon, but also Water cast upon it, or descending from higher ground, by Sluces, Conduits,

Moist.

&c. For I account moisture in Summer very needful in the soyl of Trees, and drought in Winter, provided that the Ground be neither boggy, nor the inundation be past 24 hours at any time, and but twice in the whole Summer, and so oft in the Winter, Therefore if your plot be in a bank, or have a descent, make trenches by degrees, allyes, walks, and such like, so as the water may be stayed from passage; and if too much water be any hindrance to your walks, (for dry walks do well become an Orchard, and an Orchard them) raise your walk with earth first, and then with stones as big as wall-nuts, and lastly, with gravel. In Summer you need not doubt too much water from heaven, either to hurt the health of your Body, or your Trees. And if over-flowing molest you, after one day, avoid it then by deep trenching.

Some for this purpose dig the soyl of their Orchards, to receive moisture, which I cannot approve: for the roots with digging are oftentimes hurt, and especially being digged by some unskilful Servant; for the Gardener cannot do all himself: And moreover, the Roots of Apples and Peares, being laid near day, with the heat of the Sun, will put forth suckers, which are a great hindrance, and sometimes with evil guiding, the destruction of Trees, unless the delving be very shallow, and the ground laid very level again. Cherries and Plums without delving, will hardly or never (after twenty years) be kept from such suckers, nor Apples.

Grass.

Grass also is thought needful for moisture, so you let it not touch the Roots of your Trees; for it will breed moss; and the boal of your Tree near the Earth, would have the comfort of the Sun and Air.

Some take their ground to be too moist, when it is not so, by reason of water standing thereon; for except in sowe Marshes, Springs, and continual over-flowings, no earth can be too moist. Sandy, and fat earth, will avoid all water falling, by receipt: indeed a stiff Clay will not receive the water, and therefore if it be grassie or plain, especially hollow, the water will abide, and it will seem waterish, when the fault is in the want of manuring, and other good dressing.

This plainness, which we require, had need be natural, because to force any uneven ground, will destroy the fatness: for every
soyl

foyl hath his crust next day, wherein Trees and Herbs put their Roots, and whence they draw their sap, which is the best of the foyl, and made fertil with heat and cold, moisture and drought, and under which, by reason of the want of the said temperature, by the said four qualities, no Tree nor Herb (in a manner) will or can put root; as may be seen, if in digging your ground, you take the weeds of most growth, as grafs, or docks, (which will grow, though they lye upon the earth bare,) yet bury them under the crust, and they will sooner die and perish, and become manure to your ground. This crust is not past 15 or 18 inches deep in good ground, or other grounds less. Hereby appears the fault of forced plains, viz. your crust in the lower parts is covered with the crust of the higher parts, and both with worse earth: your heights having the crust taken away, are become meerly barren; so that either you must force a new crust, or have an evil foyl. And be sure you level before you plant, lest you be forced to remove, or hurt your Plants by digging, and casting among their roots. Your ground must be cleared, as much as you may, of stones and gravel, walls, hedges, bushes, and other weeds.

Naturally
plain.

Crust of the
Earth.

CHAP. III.

Of the Site.

There is no difference, that I find, betwixt the necessity of a good foyl, and a good Site of an Orchard: For a good foil (as is before described, cannot want a good Site; and if it do, the fruit cannot be good; and a good Site will much amend an evil foil. The best Site is in low grounds, and (if you can) near unto a River. Low and near a River. High Grounds are not naturally fat.

And if they have any fatness by man's hand, the very descent in time doth wash it away. 'Tis with Grounds in this case, as it is with men in a Common-wealth; Much will have more: and, *Once Poor, seldome or never Rich.* The Rain will scind and wash, and the Wind will blow fatness from the heights to the hollows, where it will abide and fatten the Earth, though it were barren before.

Hence it is, that we have seldome any plain Grounds, and low, a barren, and as seldome any heights naturally fertile. It is

unspeakable, what fatness is brought to low grounds by innundations of Waters; neither did I ever know any barren Ground in a low plain by a River side. The goodness of the soyl in *Howle* or *Hollowderness* in *Torkshire*, is well known to all that know the River *Humber*, and the huge bulks of their Cattel there. By estimation of those that have seen the low Grounds in *Holland* and *Zealand*, they far surpass most Countries in *Europe* for fruitfulness, and onely because they lie so low. The World cannot compare with *Egypt* for fertility, so far as *Nilus* doth overflow his Banks: So that a fitter place cannot be chosen for an Orchard, then a low plain by a River side. For besides the fatness which the Water brings, if any cloudy mist or rain be stirring, it commonly falls down to, and followes the course of the River.

Psal. 1. 3.
Ezek. 17. 8.
Eccclus. 39. 17.

And where see we greater Trees of bulk and bough, then standing on, or near the Water side? If you ask why the Plains in *Holderness*, and such Countries, are destitute of Wood? I answer, That Men and Cattel (that have put Trees thence, from out of plains to void corners) are better than Trees. Neither are those places without Trees. Our old Fathers can tell us how Woods are decayed, and People in the room of Trees multiplied. I have stood somewhat long in this point, because some do condemn a moist soil for Fruit-Trees.

Mr. Markham.

Winds.
Chap. 19.

A low ground is good to avoid the danger of Winds, both for shaking down your unripe fruit. Trees (the most that I know) being loaden with Wood for want of proyning, and growing high by the unskilfulness of the Arborist, must needs be in continual danger of the South-West, West and North-West Winds, especially in *September* and *March*, when the Air is most temperate from extream heat and cold, which are deadly enemies to great Winds. Wherefore, chuse your ground low: Or if you be forced to plant in a higher Ground, let high and strong Walls, Houses and Trees, as Wall-nuts, Plane-Trees, Oaks and Ashes, placed in good order, be your fence for Winds.

The sucken of your dwelling house, descending into your Orchard, if it be cleanly conveyed, is good.

Sun.

The Sun, in some sort, is the life of the World: it maketh proud growth, and ripens kindly and speedily, according to the golden Tearn, *Annus fructificat, non tellus*. Therefore, in the Countries

Countries nearer approaching the Zodiack, the Suns habitation, they have better, and sooner ripe Fruit, then we that dwell in these frozen parts.

This provoketh most of our great Arborists to plant Apricocks, Cherries and Peaches, by a Wall, and with tacks and other means to spread them upon, and fasten them to a Wall, to have the benefit of the immoderate reflex of the Sun, which is commendable, for the having of fair, good, and soon ripe Fruit. But let them know, it is more hurtful to the Trees, than the benefit they reap thereby, as not suffering a Tree to live the tenth part of his age; it helps *Gardeners* to work. For first, the Wall hinders the roots; because into a dry and hard Wall of earth or stone a Tree will not, nor cannot put any root to profit, but especially it stops the passage of the sap, whereby the bark is wounded, and the Wood and diseases grow, so that the Tree becomes short of life. For as in the body of man, the leaning or lying on some member, whereby the course of blood is stoppt, makes that member as it were dead for the time, till the blood return to his course, and I think, if that stopping should continue any time, the member will perish for want of blood, (for the life is in the blood) and so indanger the body; so the sap is the life of the Tree, as the blood is to man's Body: neither doth the Tree in Winter (as is supposed) want his sap, no more than man's Body his blood, which in Winter, and time of sleep, draws inward: so that the dead time of Winter, to a Tree, is but a night of rest: for the Tree at all times, even in Winter, is nourish'd with sap and growth as well as man's body. The chilling cold may well some little time stay or hinder the proud course of the sap, but so little and so short a time, that in calm and mild seasons, even in the depth of Winter, if you mark it, you may easily perceive the sap to put out, and your Trees to increase their buds which were formed in the Summer before, and may easily be discerned; for leaves fall not off, till they be thrust off with the knots or buds, whereupon it comes to pass, that Trees cannot bear fruit plentifully two years together, and make themselves ready to blossom against the seasonableness of the next Spring.

And if any Frost be so extream, that it stay the sap too much, or too long, then it kills the forward fruit in the bud, and sometimes

Trees against
a Wall.

times the tender leaves and twigs, but not the Tree: Wherefore to return, it is perilous to stop the sap. And where, or when did you ever see a great Tree packt on a wall? Nay, who did ever know a Tree so unkindly splat, come to age? I have heard of some that out of their imaginary cunning, have planted such Trees on the *North* side of the Wall, to avoid drought: but the heat of the Sun is as comfortable (which they should have regarded) as the drought is hurtful. And although water is a sovereign remedy against drought, yet want of Sun is no way to be helped. Wherefore, to conclude this Chapter, let your ground lye so, that it may have the benefit of the *South* and *West* Sun, and so low and close, that it may have moisture, and increase his fatness, (for Trees are the greatest suckers and pillars of the Earth) and (as much as may be) free from great Winds.

CHAP. IV.

Of the Quantity.

IT would be remembred what a benefit riseth, not only to every particular Owner of an Orchard, but also to the Commonwealth by Fruit, as shall be shewed in the 16th Chapter (God willing); whereupon must needs follow, the greater the Orchard is (being good, and well kept) the better it is: for of good things, being equally good, the biggest is the best. And if it shall appear, that no ground a man occupieth, (no, not the Corn-field) yieldeth more gain to the purse, and house-keeping (not to speak of the unspeakable pleasure) quantity for quantity, then a good Orchard, (besides, the cost in planting and dressing an Orchard is not so much by far, as the labour and Seeding of your Corn-fields, nor for durance of time comparable, besides the certainty of the one before the other) I see not how any labour or cost in this kind, can be idely or wastfully bestowed, or thought too much. And what other thing is a Vineyard, in those Countries where Vines do thrive, then a large Orchard of Trees bearing fruit; or what difference is there in the juyce of the Grape, and our *Syder* and *Perry*, but the goodnets of the soyl, and climate where they grow? which maketh the one more ripe, and so more pleasant than the other. Whatsoever can be said for the benefit rising from

Orchard as
good as a
Corn-field.

Compared
with a Vine-
yard.

an Orchard, that makes for the largeness of the Orchard bounds. And me thinks they do preposterously, that bestow most cost and labour, and more ground in and upon a Garden, than an Orchard, whence they reap and may reap both more pleasure and more profit, by infinite degrees. And further, that a Garden never so fresh, and fair, and well kept, cannot continue without both renewing of the earth and herbs often, in the short and ordinary age of a man: whereas your Orchard well kept, shall dure divers hundred years, as shall be shewed Chapter 14. In a large Orchard there is much labour saved, in fencing and otherwise: for three little Orchards or a few Trees, being in a manner all out-sides, are so blasted and endangered, and commonly in keeping neglected, and require a great fence; whereas in a great Orchard, Trees are a mutual fence one to another, and the keeping is regarded; and less fencing serves six Acres together, then three in several inclosures.

Now what quantity of ground is meetest for an Orchard, can no man prescribe, but that must be left to every mans several Judgment, to be measured according to his ability and will; for other necessities besides Fruit must be had, and some are more delighted with Orchards than others.

Let no man, having a fit plot, plead poverty in this case; for an Orchard once planted, will maintain it self, and yield infinite profit beside. And I am perswaded, that if men did know the right and best way of planting, dressing, and keeping Trees, and felt the profit and pleasure thereof, both they that have no Orchards, would have them, and they that have Orchards would have them larger, yea, Fruit-Trees in their hedges, as in *Worcestershire, &c.* And I think the want of planting is a great loss to our Common-wealth, and in particular, to the Owners of Lordships, which Landlords themselves might easily amend, by granting longer time and better assurance to their Tenants, who have taken up this Proverb, *Botch and fit; Build and flit*: for who will build or plant for another mans profit? Or the Parliament might enjoin every occupier of Grounds to plant and maintain for so many Acres of fruitful Ground, so many several Trees, or kinds of Trees for Fruit. Thus much for Quantity.

Compared with a Garden.

What quantity of Ground.

What is no hindrance.

How Landlords by their Tenants may make flourishing Orchards in England.

A. All these square must be set with Trees, the Gardens and other Ornaments must stand in spaces betwixt the Trees, and in the borders and fences.

B. Trees twenty yards asunder.

C. Garden Knots.

D. Kitching Garden

E. Bridge.

F. Conduit.

G. Staires.

H. Walks set with great wood thick.

I. Walks set with great wood round about your Orchard.

K. The Out fence,

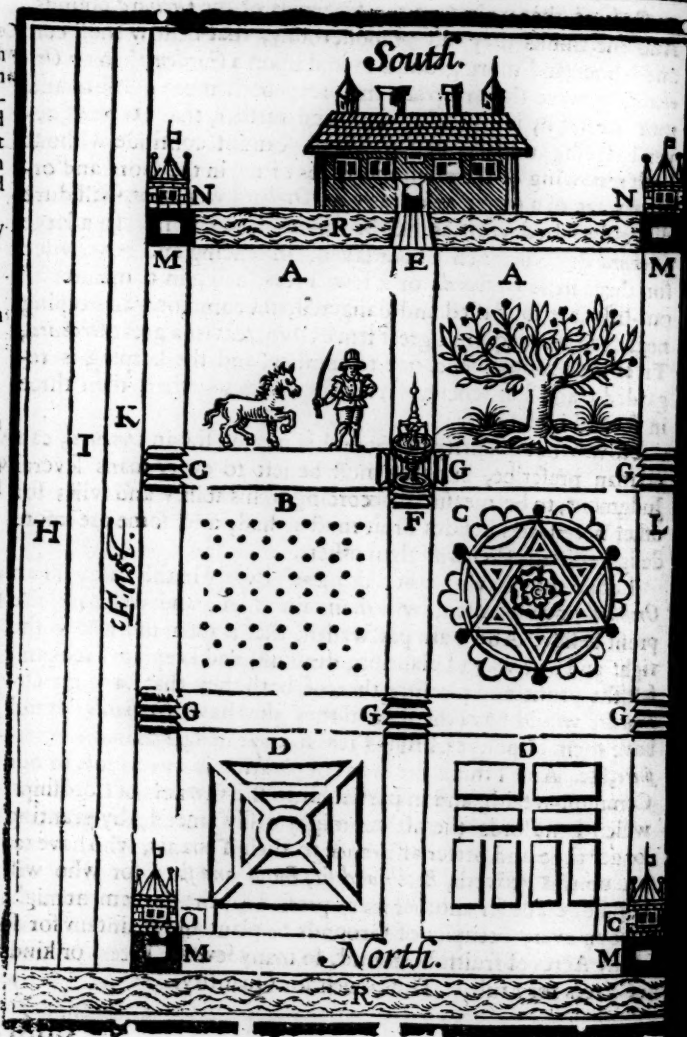
L. The Out fence set with stone-fruit

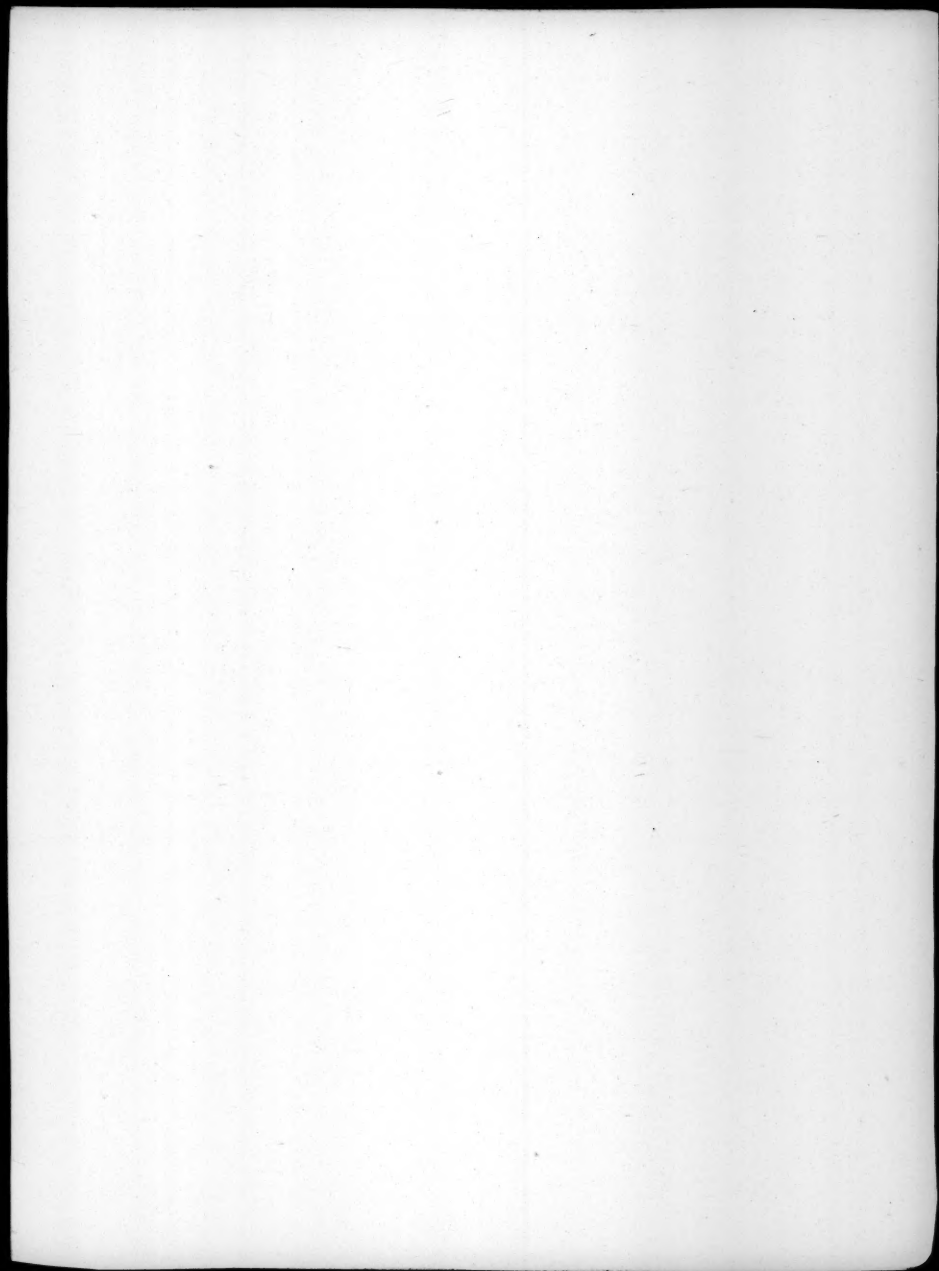
M. Mount. To force Earth for a Mount or such like, set it round with quick, and lay boughes of Trees strangely intermingled, the tops inward, with the Earth in the middle.

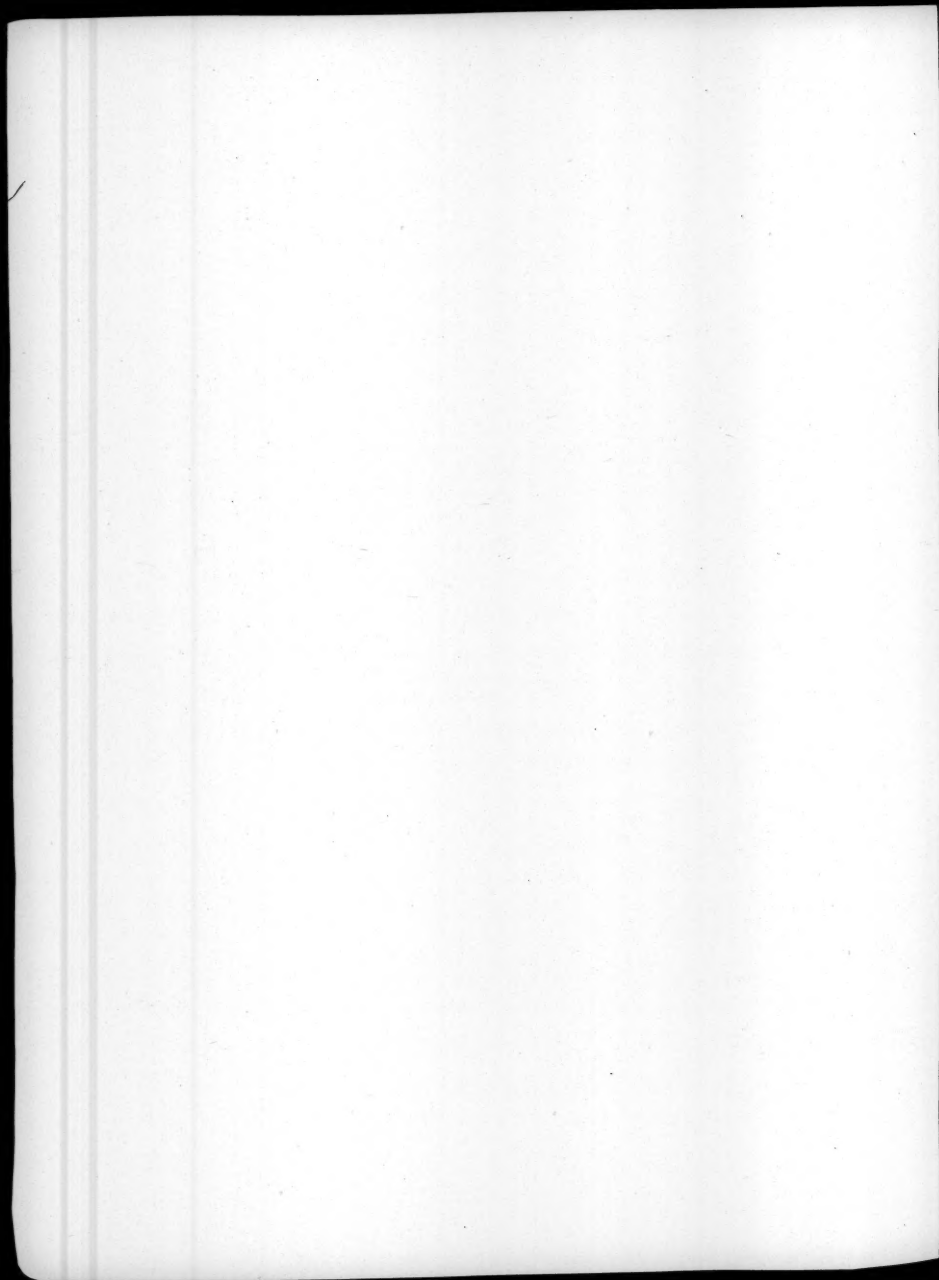
N. Still house.

O. Good standing for Bees, if you have an house.

P. If the River run by your door, and under your Mount, it will be pleasant.







CHAP. V.

Of the Form.

THE goodneſs of the Soil and Site, are neceſſary to the well-being of an Orchard ſimply; but the form is ſo far neceſſary, as the owner ſhall think meet. For that kind of form where-with every particular man is delighted, we leave it to himſelf, *Suum cuique pulebrum*. The form that men like in general, is a ſquare: for although roundneſs be *forma perfectiſſima*, yet that Principle is good, where neceſſity by Art doth not force ſome other form. If within one large ſquare, the Gardiner ſhall make one round Labyrinth or Maze, with ſome kind of Berries, it will grace your form, ſo there be ſufficient room left for walks, ſo will four or more round knots do, for it is to be noted, that the eye muſt be pleaſed with the form. I have ſeen ſquares riſing by degrees, with ſtairs from your houſe-ward, according to this form which I have, *Cræſſa quod ajunt Minerva*; with an unſteady hand, rough hewen, for in forming Country Gardens, the better fort may uſe better forms, and more coſtly work. What is needful more to be ſaid, I refer all that (concerning the form) to the Chapter 17. *Of the Ornaments of an Orchard*.

The uſual
Form is a
ſquare.

CHAP. VI.

Of Fences.

ALL your labour paſt and to come about an Orchard is loſt, Effects of evil
fencing. unleſs you fence well: it ſhall grieve you much to ſee your young Sets rub'd looſe at the roots, the bark pill'd, the boughs and twigs cropt, your fruit ſtoln, your Trees broken, and your many years labours and hopes deſtroyed, for want of Fences. A chief care muſt be had in this point: you muſt therefore plant in ſuch a Soil, where you may provide a convenient, ſtrong, and ſeemly fence. For you can poſſeſs no goods, that have ſo many enemies as an Orchard, look Chapter 13. Fruits are ſo delightful, and deſired of ſo many, (nay, in a manner of all) and yet few will be at coſt, and take pains to provide them. Fence well therefore, let your plot be wholly in your own power, that you

C

make

Let the fence
be your own.

Kinds of Fences,
earthen
walls.

make all your fence your self: for neighbours fence is none at all, or very careless. Take heed of a door or window, (yea of a wall) of any other mans into your Orchard, yea, though it be nailed up, or the wall be high, for perhaps they will prove thieves.

All fences commonly are made of Earth, Stone, Brick, Wood, or both Earth and Wood: Dry wall of earth, and dry ditches are the worst fences save pails or rails, and do waste the soonest, unless they be well copt with Glooe and Morter, whereon at *Michael-tide* it will be good to sowe Wall-flowers, commonly called Bee-flowers, or winter-Gilly-flowers, because they will grow (though amongst stones) and abide the strongest frost & drought, continually green and flowering, even in winter, and have a pleasant smell, and are timely, (that is, they will flower the first and the last of flowers) and are good for Bees. And your earthen wall is good for Bees, dry and warm, but these fences are both unseemly, evil to repair, and only for need, where stone or wood cannot be had. Whosoever makes such walls must not pill the ground in the Orchard, for getting earth, nor make any pits or hollows, which are both unseemly and unprofitable: Old dry earth mixt with sand is best for these. This kind of wall wil soon decay by reason of the Trees which grow near it, for the roots and boals of great Trees, will increase, undermine, and overturn such Walls, though they were of stone, as is apparent by Ashes, Round-trees, Butt-trees, and such like, carried in the char, or berry, by birds into stone walls.

Rule and Rail.

Fences of dead wood, as pales will not last, neither will rails either last or make good fence.

Stone walls.

Stone walls (where stone may be had) are the best of this sort, both for fencing, lasting, and shrowding of your young trees; but about this you must bestow much pains and more cost, to have them handsome, high, and durable.

Quick wood
and Moats.

But of all other (in mine opinion) Quick-woods and moats, or ditches of water, where the ground is level, is the best fence: In unequal grounds, which will not keep water, there a double ditch may be cast, made streight and level on the top two yards, broad for a fair walk, five or six foot higher than the soil, with a gutter on either side, two yards wide, & four foot deep, set with-
out with three, or four cheifs of thorns, and within with Cherries,

Plums,

Plums, Damsons, Bullis, Filbirds, (for I love those trees better for their fruit, and as well for their form, as Privit,) for you may make them take any form. And in every corner, (and middle if you will) a mount would be raised, whereabout the wood may clasp, powdered with wood-bind, which will make with dressing a fair, pleasant, profitable, and sure fence. But you must be sure that your quick thorns either grow wholly, or that there be a supply betimes, either planting new, or plashing the old where need is. And assure your self, that neither wood, stone, earth, nor water, can make so strong a fence as this at seven years growth.

Moats, Fish-ponds, and (especially at one side of a River) with-^{Moats.} in and without your fence, will afford you fish, fence, and moisture to your Trees, and pleasure also, if they be so great and deep that you may have Swans, and other water-Birds, good for devouring of vermine, and boat for many good uses.

It shall hardly avail you to make any fence for your Orchard, if you be a niggard of your fruit. For as liberality will save it best from noisom neighbours, (Liberality, I say, is the best fence) so Justice must restrain Rioters. Thus when your ground is tempered, squared, and fenced, it is time to provide for planting.

C H A P. VII.

Of Sets.

THere is not one point (in my Opinion) about an Orchard more to be regarded, than the choice getting and setting of good Plants, either for the readines of having good fruit, or for continual lasting, for whosoever shall fail in the choice of good Sets, or in getting, or gathering, or setting his plants, shall never have a good or lasting Orchard. And I take want of skill in this faculty, to be a chief hinderance to the most Orchards, and to many for having Orchards at all.

Some for readines use Slips, which seldom take Root, and ^{Slips.} if they do take, they cannot last, both because their Root having a main wound will in short time decay the body of the Tree: and besides, that Roots being so weakly put, are soon nipt with drought or frost, I could never see (lightly) any slip, but of Apples only, set for Trees.

Bur-knot,

A Bur-knot kindly taken from an Apple-tree, is much better and surer. You must cut him close at the Root end, an handful under the knot, (some use in Summer about Lammas, to circumscribe him, and put earth to the knots with hay-Ropes, and in winter cut him off and set him; but this is curiosity needles, and danger with removing and drought) and cut away all his twigs save one, the most principal, which in setting you must leave above the earth, burying his trunk in the crust of the earth for his Root. It matters not much what part of the bough the twigs grow out of. If it grow out of, or neer the Root end, some say such an Apple will have no core nor kernel. Or if it please the Planter, he may let the bough be crooked, and let out his top-end one foot, or somewhat more, wherein will be good graftings, if either you like not, or doubt the fruit of the bough, (for commonly your bur-knots are Summer-fruit) or if you think he will not recover his wound safely.

Usual Sets.

The most usual kind of Sets, are Plants with Roots growing, of kernels of Apples, Pears, and Crabs, or Stones of Cherries, Plums, &c. removed out of a nursery, wood, or other Orchard, into, and set, in your Orchard in due places; I grant this kind to be better than either of the other by much, as more sure and more durable. Herein you must note, that in sets so removed, you get all the Roots you can, and without bruising of any; I utterly dislike the opinion of those great Gardiners, that following their Books, would have the main Roots cut away: for tops cannot grow without Roots. And because none can get all the Roots, and removal is an hinderance, you may not leave on all the tops, when you set them: For there is a proportion betwixt the Top and Root of a Tree, even in the number (at least in the growth) if the Roots be many, they will bring you many Tops, if they be not hindered. And if you use to stow or top your tree too much, or too low, and leave no issue, or little for sap, (as is to be seen in your hedges) it will hinder the growth of Roots & Boal, because such a kind of stowing is a kind of smothering or choaking the sap.

Main Roots cut.

Stow Sets removed.

Great Wood, as Oak, Elm, Ash, &c. being continually kept down with sheer knife, ax, &c. neither boal nor root will thrive, but as an hedge or bush. If you intend to graft in your Sets, you may cut him closer with a greater wound, and nearer the earth with-

within a foot or two, because the graft or grafts will cover his wound. If you like his fruit, and would have him to be a tree of himself, be not so bold. This I can tell you, that though you do cut his top close, and leave nothing but his bulk, because his roots are few, if he be (but little) bigger than your thumb, (as I with all plants removed to be) he will safely recover his wound within seven years, by good guidance, that is, if the next time of dressing, immediately above his uppermost sprig, you cut him off aslope cleanly, so that the sprig stand on the back-side, (and if you can Northward, that the wound may have the benefit of the Sun) at the upper-end of the wound, and let that sprig only be the boal. And take this for a general Rule, Every young plant, if he thrive, will recover any wound above the earth, by good dressing, although it be to the one half, and to his very heart. This short cutting at the remove, saves your plants from wind, and needs the less or no staking: I commend not lying or leaning of Trees against holds or stays, for it breeds obstruction of sap, and wounds incurable. All removing of Trees as great as your arm, or above, is dangerous; though some time such will grow, but not continue long, because they be tainted with deadly wounds, either in their root or top, (and a tree once thoroughly tainted, is never good.) And though they get some hold in the earth with some lesser taw or taws, which give some nourishment to the body of the Tree, yet the heart being tainted, he will hardly ever thrive; which you may easily discern by the blackness of the boughs at the heart, when you dress your trees. Also, when he is set with more tops than the Roots can nourish; the tops decaying, blacken the boughs, and the boughs the arms, and so they boyl at the very heart. Or this taint in the removal, if it kill not presently, but after some short time, it may be discerned, black, or yellowness in the bark, and a small bungred leaf. Or if your removed plant put forth leaves the next and second Summer, and little or few sprafes, is a great signe of a taint; and next years death. I have known a Tree tainted in setting, yet grow, and bear blossoms for divers years; and yet for want of strength, could never shape his fruit.

Next unto this, or rather equal with these Plants, are suckers growing out of the Roots of great Trees, which Cherries and

Plu. ns.

General rule.

Tying of trees.

General rule.

Signes of Diseases, chap.

13.

Suckers good Sets.

Plums do seldom or never want, and being taken kindly with their Roots, will make very good Sets. And you may help them much by enlarging their Roots with the taws of the tree, whence you take them. They are of two sorts; either growing from the very root of the Tree: and here you must be careful, not to hurt your Tree when you gather them, by Ripping amongst the Roots, and that you take them clean away; for these are a great and continual annoyance to the growth of your Tree, and they will hardly be cleansed. Secondly, or they do arise from some taw: and these may be taken without danger, with long and good Roots, and will soon become Trees of strength.

A Running
Plant.

There is another way, which I have not thorowly proved, to get not only plants for grafting, but Sets to remain for Trees, which I call a *Running Plant*, the manner of it is this: Take a Root or kernel, & put it into the middle of your plot, & the second year in the spring, geld his top, if he have one principal, (as commonly by nature they have) and let him put forth only four Syons toward the four corners of the Orchard, as near the earth as you can. If he put not four (which is rare) stay his top till he have put so many. When you have four such, cut the stock aslope, as is aforesaid in this Chapter, hard above the uppermost sprig, and keep those four without Syons clean and streight till you have them a yard and a half, at least, or two yards long. Then the next spring, in grafting time, lay down those four sprays, towards the four corners of your Orchard, with their tops in a heap of pure and good earth, and raised as high as the root of your Syon, (for sap will not descend) & a sod to keep them down, leaving nine or twelve inches of the top to look upward. In that hill he will put roots, and his top new Syons, which you must spread as before, and so from hill to hill, till he spread the compass of your ground, or as far as you list. If in bending, the Syons crack, the matter is small; cleanse the ground, and he will recover. Every bended bough will put forth branches, and become Trees. If this plant be of a bur knot, there is no doubt: I have proved it in one branch my self, and I know at *Wilton in Cleveland*, a Pear-tree of a great bulk and age, blown close to the earth, hath put at every knot Roots into the earth, and from Root to top, a great number of mighty arms or trees, filling a great room, like many Trees, or

a little Orchard; much better may it may be done by Art, in a less Tree. And I could not dislike this kind, save that the time will be long before it come to perfection.

Many use to buy sets already grafted, which is not the best way: for first, all removes are dangerous: Again, there is danger in the carriage: Thirdly, it is a costly course of planting: Fourthly, every Gardner is not trusty to sell you good Fruit: Fifthly, you know not which is best, which is worth, and so may take most care about your worst Trees. Lastly, this way keeps you from practise, and so from experience, in so Good, Gentlemanly, Scholar-like, and profitable a faculty. Sets bought.

The only best way (in my opinion) to have sure and lasting Sets, is never to remove: for every remove is a hinderance, if not a dangerous hurt, or deadly taint. This is the way: The platform being laid, and the plot appointed where you will plant every Set in your Orchard, dig the room where your Set shall stand, a yard compass, and make the earth mellow and clean, and mingle it with a few cole-athes, to avoid worms, and immediately after the first change of the Moon, in the latter end of February, the earth being afresh turned over, put in every such room three or four kernels of Apples or Pears of the best; every kernel in an hole made with your finger, finger-deep, a foot distant one from another, and that day month following, as many more, (least some of the former miss) in the same compass, but not in the same holes. Hence (God willing) shall you have roots enough: If they all, or divers of them come up, you may draw (but not dig) up (not put down) at your pleasure, the next November. How many soever you take away, to give or bestow else where, be sure to leave two of the proudest. And when in your second or third year you graft, if you graft them at all, leave the one of those two ungrafted, lest in grafting the other you fail. For I find by trial, that after the first or second grafting in the same stock, being mist (for who hits all) the third mels puts your stock in deadly danger, for want of issue of sap. Yea, though you hit in grafting, yet may your grafts with wind or otherwise be broken down. If your grafts or graft prosper, you have your desire, in a plant unremoved, without taint, and the fruit at your own choice: and so you may, (some little earth being removed) pull, but not dig up. The best Sets.
Unremoved
how.

up the other plant or plants in that room. If your graft or stock, or both perish, you have another in the same place, of better strength to work upon, for thriving without snub, he will overlay your grafted stock much. And it is hardly possible to miss in grafting, so often, if your Gardiner be worth his name.

Sets ungrafted
best of all.

It shall not be amiss, (as I judge it) if your kernels be of choice fruit, and that you see them come forward proudly in their body, and bear a fair and broad leaf in colour, tending to a greenish yellow, (which argues pleasant and great fruit) to try some of them ungrafted: for although it be a long time ere this come to bear fruit, ten or twelve years or more; and at their first bearing, the fruit will not seem to be like his own kind, yet am I assured, upon trial, before twenty years growth, such Trees will increase the bigness and goodness of their fruit, and come perfectly to their own kind. Trees (like other breeding Creatures) as they grow in years, bigness, and strength, so they mend their fruit. Husbands and Housewives find this true by experience, in the rearing of their young store. More than this, there is no Tree like this for soundness, and durable last, if his keeping and dressing be answerable. I grant, the readiest way to come soon to fruit, is grafting; because, in a manner, all your grafts are taken off fruit-bearing Trees.

Time of re-
moving

Now when you have made choice of your Sets to remove, the ground being ready, the best time is, immediately after the fall of the Leaf, in or about the change of the Moon, when the sap is most quiet, for then the sap is turning; for it makes no stay, but in the extremity of drought or cold: At any time in winter, may you transplant Trees, so you put no ice nor snow to the Root of your Plant in the setting; and therefore open, calm, and moist weather is best. To remove, the Leaf being ready to fall, and not fallen, or buds apparently put forth in a moist warm season, for need, sometime may do well; but the safest is to walk in the plain trodden path.

General rule.

Some hold Opinion, That it is best removing before the fall of the Leaf, and I hear it is commonly practised in the South by our best Arborists, the leaf not fallen, & they give the reason to be, that the descending of the sap will make speedy Roots. But mark the Reasons following, & I think you shall find no soundness, either

In that position or practice, at least in the reason.

1. I say it is dangerous to remove when the sap is not quiet; for every remove gives a main check to the stirring sap, by staying the course thereof in the body of your plant, as may appear by trees removed any time in Summer, they commonly dye, nay, hardly shall you save the life of the most young and tender plant of any kind of wood (scarcely hearbs) if you remove them in the pride of sap; for proud sap universally stayed by removal, ever hinders, often taints, and so presently, or in very short time kills. Sap is like blood in mans body, in which is the life, Chap. 3. page 9. If the blood universally be cold, life is excluded: so is sap tainted by untimely removal. A stay by drought, or cold, is not so dangerous, (though dangerous, if it be extrem) because more natural.

2. The sap never descends, as men suppose; but is consolidated and transubstantiated into the substance of the tree, and passeth (alwaies above the earth) upward, not only betwixt the bark and the wood, but also into and in both body and bark, though not so plentifully, as may appear by a tree budding, nay, fructifying two or three years, after he be circumcised, at the very root, like a River that enlargeth his channel by a continual descent.

3. I cannot perceive what time they would have the sap to descend. At *Midsummer* in a biting drought it staves, but descends not; for immediately upon moisture it makes second shoots, at (or before rather) *Michaelide*, when it shapens his buds for next years fruit. If at the fall of the leaf, I grant, about that time is the greatest stand, but no descent of sap, which begins somewhat before the leaf fall, but not long; therefore at that time must be the best removing, not by reason of descent, but stay of sap.

4. The sap in this course hath its profitable and apparent effects; as the growth of the tree, covering of wounds, putting of buds, &c. Whereupon it follows, if the sap descend, it must needs have some effect to shew in.

5. Lastly, boughs plasht and laid lower than the root, dye for want of sap descending, except where it is forced by the main stream of the sap, as in top boughs hanging like water in pipes, or except the plasht boughs lying on the ground put roots of his own; yea, under boughs, which we commonly call water-boughs

can scarcely get sap to live, yea, in time die, because the sap doth press so violently upward, and therefore the fairest shoots and fruits are, alwaies in the top.

Remove soon.

Object. If you say that many so removed thrive; I say, That somewhat before the fall of the leaf (but not much) is the stand; for the fall and the stand are not at one instant; before the stand, is dangerous. But to return.

The sooner in Winter you remove your sets, the better; the latter, the worse; for it is very perillous if a strong draught take your sets before they have made good their Rooting. A Plant set at the fall, shall gain (in a manner) a whole years growth of that which is set in the Spring after.

The manner of setting.

I use in the setting to be sure that the Earth be mouldy, (and somewhat moist) that it may run among the small tangles without straining or bruising; and as I fill in Earth to his Root, I shake the Set easily too and fro, to make the earth settle the better to his Roots; and withal easily with my foot I put in the earth close; for Air is noysome, and concavities will follow. Some prescribe Oats to be put in with the Earth: I could like it, if I could know any Reason thereof. And they use to set their Plants with the same side towards the Sun; but this conceit is like the other. For first, I would have every Tree to stand so free from shade, that not onely the Root (which therefore you must keep bare from grass) but body, boughs, and branches, and every spray, may have the benefit of the Sun. And what hurt, if that part of the Tree which before was shadowed, be now made partakers of the heat of the Sun? In turning of Bees, I know it is hurtful, because it changeth their entrance, passage, and whole work, but not so in Trees.

Set in the crust.

Moisture good.

Set as deep as you can, so that in any wise you go not beneath the crust. Look Chap. 2.

We speak in the second Chapter of moisture in general; but now especially having put your removed plant into the Earth, pour on water (of a puddle were good) by distilling presently, and so every week twice, in strong drought, so long as the earth will drink, and refuse by over-flowing. For moisture mollifies, and both gives leave to the Root to spread, and makes the earth yield sap and nourishment with plenty and facility. Nurseries, they

(they say) give best and most milk after warm drinks.

If your ground be such, that it will keep no moisture at the Root of your plant, such plants shall never like, or but for a time. There is nothing more hurtfull for young trees, then piercing drought. I have known trees of good stature, after they have been of divers years growth, and thrive well for a good time, perish for want of water, and very many by reason of taints in setting.

It is meet your sets and grafts be fenced, till they be as big as your arm, for fear of annoyances. Many wayes may Sets receive damages, after they be set, whether grafted or ungrafted. For although we suppose, that no noysome beast or other thing must have access among your trees, yet by casualty, a Dog, Cat, or such like, or your self, or negligent friend bearing you Company, or a shrewd boy, may tread or fall upon a young and tender plant or graft. To avoid these and many such chances, you must stake them round a pretty distance from the Set, neither so near nor so thick, but that it may have the benefit of the Sun, Rain, and Air. Your stakes (small or great) would be so surely put, or driven into the earth, that they break not, if any thing happen to lean upon them, else may the fall be more hurtfull then the want of the fence. Let not your stakes shelter any weeds about your Sets; for want of Sun is a great hinderance. Let them stand so far off, that your grafts spreading receive no hurt, either by rubbing on them, or of any other thing passing by. If your stock be long, and high grafted, (which I must discommend, (except in need) because there the sap is weak, and they are subject to strong winds, and the lightings of birds,) tie easily with a soft list three or four prickles under the clay, and let their tops stand above the grafts to avoid the lighting of Crows, Pies, &c. upon your grafts. If you stick some sharp thorns at the Root of your stalks, they will make hurtfull things keep off the better. Other better fences for your grafts I know none. And thus much for sets and setting.

CHAP. VIII.

Of the distance of Trees.

I Know not to what end you should provide good ground, well fenced, and plant good sets, and when your trees should come

Hurts of too
neer planting.

to profit, have all your labours lost, for want of due regard to the distance of placing your trees. I have seen many trees stand so thick, that one could not thrive for the throng of his neighbours. If you do mark it, you shall see the tops of trees rubbed off, their side galled like a gall'd horse back; and many trees have more stumps than boughs, and most trees not well thriving, but short, stumpish, and evil thriving boughs; like a Corn-field over-seeded, or a Town over-peopled, or a pasture over-laid; which the Gardner must either let grow, or leave the tree very few boughs to bear fruit. Hence small thrift, galls, wounds, diseases, and short life to the trees; and, while they live, green little, hard, worm-eaten, and evil thriving fruit arise, to the discomfort of the owners.

General rule.
All touches
hurtful.

To prevent which discommodity, one of the best remedies is, the sufficient and fit distance of trees. Therefore at the setting of your plants, you must have such respect, that the distance of them be such that every tree be not annoyance, but an help to his fellows; for trees (as all other things of the same kind) should shroud, and not hurt one another. And assure your self, that every touch of trees (as well under as above) is hurtfull: Therefore this must be a general rule in this Art, that no tree in an Orchard well ordered, or no bough, nor cyon, drop upon or touch his fellows. Let no man think this impossible, but look in the eleventh Chapter of dressing of trees. If they touch, the wind will cause a forcible rub. Young twigs are tender, if boughs or arms touch or rub, if they are strong, they make great galls. No kind of touch thereof in trees can be good.

The best distance of trees.

Now it is to be considered what distance among Sets is requisite, and that must be gathered from the compass and room that each tree by probability will take and fill. And herein I am of a contrary opinion to all them which practise or teach the planting of trees, that ever yet I knew, read, or heard of: for the common space between tree and tree, is ten foot, if twenty foot, it is thought very much. But I suppose twenty yards distance is small enough betwixt tree and tree, or rather too little. For the distance must needs be as far as two trees are well able to over-spread and fill so they touch not by one yard at the least. Now I am assured, and I know one Apple-tree, set of a slip *finger great*,
in

in the space of twenty years (which I account a very small part of a trees age, as is shewed Chapter 14.) hath spread his boughs eleven or twelve yards compass; that is, five or six yards on every side. Hence I gather, that in forty or fifty years, (which yet is but a small time of his age) a tree in good soyl, well liking, by good dressing (for that is much available to this purpose) will spread double at the least, *viz.* twelve yards on a side; which being added to twelve allotted to his fellow make twenty and four yards, and so far distant must every tree stand from another. And look how far a tree spreads his boughs above, so far doth he put his roots under the earth, or rather further, if there be no stop nor let by walls, trees, rocks, barren earth, and such like: for an huge bulk, and strong armes, massie boughs, many branches, and infinite twigs, require wide spreading Roots. The top hath the vast air to spread his boughs in, high and low, this way and that way; but the Roots are kept in the crust of the earth, they may not go downward, nor upward out of the earth, which is their Element, no more than the Fish out of the water, Camelion out of the air, nor Salamander out of the fire. Therefore they must needs spread far under the earth. And I dare well say, If nature would give leave to man, by Art to dress the Roots of Trees, to take away the taws, and tangles that lap and fret, and grow superfluously and disorderly, (for every thing *sublunary* is cursed for man's sake) the tops above being answerably dressed, we should have trees of wonderfull greatness, and infinite durance. And I perswade my self that this might be done sometimes in Winter, to trees standing in fair plains and kindly earth, with small or no danger at all. So that I conclude, that twenty four yards is the least space that Art can allow for trees to stand distant one from another.

The parts of a Tree.

If you ask me what use shall be made of that waste ground betwixt tree and tree: I answer, if you please to plant some tree or trees in that middle space, you may; and as your trees grow contiguous, great and thick, you may at your pleasure take up those last trees. And this I take to be the chief cause why the most trees stand so thick; for men not knowing (or not regarding) this secret of needfull distance, and loving fruit

Waste ground
in an Orchard.

fruit of trees planted to their hands, think much to pull up any, though they pine one another. If you or your heirs or successors would take up some great trees (past setting) where they stand too thick, be sure to do it about *Midsummer*, and leave no main Roots. I destinate the space of four and twenty yards, for trees of age and stature. More then this, you have borders to be made for walks, with Roses, Berries, &c.

And chiefly consider, that your Orchard, for the first twenty or thirty years, will serve you for many Gardens; for Saffron, Licorins, Roots, and other herbs for profit, and flowers for pleasure: so that no ground need be wasted if the Gardiner be skillfull and diligent. But be sure you come not neer with such deep delving the Roots of your Trees, whose compass you may partly discern, by the compass of the tops, if your top be well spread, And under the droppings and shadow of your Trees, be sure no herbs will like. Let this be said for the distance of Trees.

CHAP. I X.

Of the placing of Trees.

THe placing of Trees in an Orchard is well worth the regard, For although it must be granted, that any of our foresaid Trees (Chap. 2.) will like well in any part of your Orchard, being good and well drest earth: yet are not all Trees alike worthy of a good place. And therefore I wish that your Fibers, Plumbs, Damsons, Bullefs, and such like, be utterly removed from the plain soyl of your Orchard into your fence: for there is not such fertility and easefull growth, as within: and there also they are more subject to, and can abide the blasts of *Aolus*. The Cherries and Plums being ripe in the hot time of Summer, and the rest standing longer, are not so soon shaken as your better fruit, neither, if they suffer loss, is your loss so great. Besides that, your fences and ditches will devour some of your fruit growing in, or near your hedges. And seeing the continuance of all these (except Nuts) is small, the care of them ought to be the less. And make no doubt, but the fences of a large Orchard will contain a sufficient number of such kind, of Fruit-Trees in the whole compass. It is not material but at your pleasure, in the said fences, you may either intermingle your

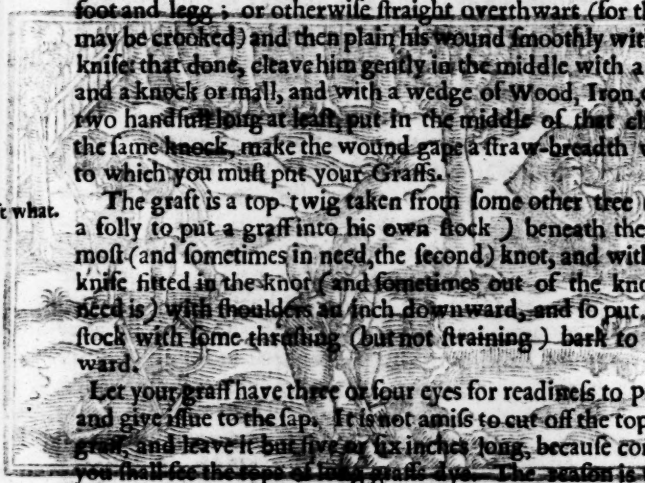
your several kinds of fruit trees, or set every kind by it self, order doth very well become your better and greater fruit. Let therefore your Apples, Pears, and Quinces, possess the soyl of your Orchard, unless you be especially affected to some of your other kinds; and of them, let your greatest trees of growth stand further from Sun, and your Quinces at the South side or end, and your Apples in the middle: so shall none be any hindrance to his fellows. The warden-tree, and Winter-pear, will challenge the preeminence for stature. Of your Apple-trees, you shall find a difference in growth. A good Pippin will grow large, and a Costard tree: lead them on the North side of your other Apples, thus being placed, the least will give Sun to the rest, and the greatest will shroud their fellows. The Fences and out-trees will guard all.

CHAP. X.

Of Grafting.

NOW are we come to the most curious point of our faculty, curious in conceit, but indeed as plain and easie as or Carving. the rest, when it is plainly shewn, which we commonly call Grafting.



Grafting what,  sing or (after some) Grafting, I cannot Etymologize or shew the original of the Word, except it come of Graving or Carving.

But the thing or matter is : The reforming of the fruit of one tree with the fruit of another, by an artifiical transplasing or transposing of a twigg, bud, or leaf, (commonly called a Graft) taken from one tree of the same, or some other kind, and placed or put to, or into another tree in one time and manner.

Kinds of grafting. Of this there be divers kinds, but three or four now especially in use : to wit, Grafting, incising, packing on, grafting in the scutchion, or inoculating ; whereof the chief and most usual is called Grafting, by the general name, *Catexoehen* :) for it is the most known, surest, readiest, and plainest way to have store of good fruit.

Graft how. It is thus wrought ; You must with a fine, thin, strong, and sharp Saw, made and armed for that purpose, cut off a foot above the ground, or thereabouts, in a plain without a knot, or as near as you can without a knot (for some stocks will be knotty) your Stock, set, or plant being surely stayed with your foot and legg ; or otherwise straight overthwart (for the Stock may be crooked) and then plain his wound smoothly with a sharp knife that done, cleave him gently in the middle with a cleaver, and a knock or mall, and with a wedge of Wood, Iron or Bone, two handfull long at least, put in the middle of that cleft, with the same knock, make the wound gape a straw-breadth wide in to which you must put your Grafts.

A graft what. The graft is a top twig taken from some other tree (for it is a folly to put a graft into his own stock) beneath the uppermost (and sometimes in need, the second) knot, and with a sharp knife fitted in the knot (and sometimes out of the knot when need is) with shoulder an inch downward, and so put into the stock with some thrashing (but not straining) bark to bark inward.

Eyes. Let your graft have three or four eyes for readines to put forth, and give issue to the sap. It is not amiss to cut off the top of your graft, and leave it but five or six inches long, because commonly you shall see the tops of long grafts eye. The reason is this, the top in grafting receives a rebuke, and cannot work so strongly presently,

sently, and your graffs receive not sap so readily, as the natural branches. When your graffs are cleanly and closely put in, and your wedge pull'd out nimbly, for fear of putting your graffs out of frame, take well tempered mortar, soundly wrought with chaff, or horse-dung, (for the dung of Cattle will grow hard, and strain your graffs) the quantity of a Goose egge, and divide it just, and therewithal cover your stock, laying the one half on the one side, and the other half on the other side of your graffs, (lest thrusting again your graffs you move them) and let both your hands thrust at once, and alike, and let your clay be tender, to yield easily; and all, lest you move your graffs. Some use to cover the cleft of the stock, under the clay, with a piece of bark or leaf, some with a sear-cloth of wax and butter, which as they be not much needful, so they hurt not, unless that by being busie about them, you move your graffs from their places. They use also moss, tied on above the clay with some bryar, wicker, or other bands, these profit nothing. They all put the graffs in danger, with pulling and thrusting: for I hold this general Rule in grafting, and planting, if your stock and graffs take, and thrive, (for some will take and not thrive, being tainted by some means in the planting, or grafting) they will (without doubt) recover their wounds safely and shortly.

The best time of grafting, from the time of removing your stock, is the next Spring, for that saves a second wound, and a second repulse of sap, if your stock be of sufficient bigness to take a graff from as big as your thumb, to as big as an arm of a man. You may graff less, (which I like) and bigger, which I like not so well. The best time of the year is in the last part of *February* or *March*, or beginning of *April*, when the Sun with his heat begins to make the sap stir more rankly about the change of the Moon, before you see any great apparencie of leaf or flowers, but only knots and buds, and before they be proud, though it be sooner: Cherries, Pears, Apricocks, Quinces, and Plums, would be gathered and grafted sooner.

The graffs may be gathered sooner in *February*, or any time within a month or two before you graff, or upon the same day (which I commend) if you get them any time before: for I

Grafts of old
Trees.

have known grafts gathered in *December*, and do well, take heed of drought; I have my self taken a burk, not of a tree, and the same day when he was laid in the earth about mid *February*, gathered grafts and put in him, and one of those grafts bore the third year after, and the fourth plentifully; Grafts of old Trees would be gathered sooner than of young Trees, for they sooner break and bud. If you keep grafts in the earth, moisture with the heat of the Sun will make them sprout as fast, as if they were growing on the tree. And therefore, seeing keeping is dangerous, the surest way (as I judge) is, to take them within a week of the time of your grafting.

Where taken.

The graft would be taken not of the proudest twigs for it may be your stock is not answerable in strength. And therefore (say I) the grafts brought from South to us in the North, although they take and thrive, (which is somewhat doubtful, by reason of the difference of the clime and carriage,) yet shall they in time fashion themselves to our cold Northern Soil, in growth taste, &c.

Nor of the poorest; for want of strength may make them unready to receive sap, (and who can tell but a poor graft is tainted) nor on the outside of your Tree, for where should your tree spread, but in the middle; for there you may be sure your Tree is no whit hindered in his growth or form. He will still recover inward, more than you could wish. If your clay cleft in Summer with drought, look well in the chinks for Emmets, and Earwigs, for they are cunning and close thieves about grafts; you shall find them stirring in the morning and evening, and the rather in the moist weather: I have had many young buds of Grafts, even in the flourishing, eaten with Ants. Let this suffice for grafting, which is in the faculty counted the chief secret, and because it is most usual, it is best known.

Emmets.

Grafts are not to be disliked for growth, till they wither, pine, and die. Usually before *Midsummer* they break, if they live. Some (but few) keeping proud and green, will not put till the second year, so is it to be thought of Sets.

The first shew of putting is no sure signe of growth, it is but the sap the graft brought with him from his Tree.

So soon as you see the graft put forth growth, take away the clay, for then doth neither the stock nor the graft need it, (put a little

little fresh well tempered clay in the hole of the stock) for the clay is now tender, and rather keeps moisture than drought.

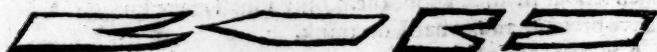
The other ways of changing the natural Fruit of Trees, are more curious than profitable, and therefore I mind not to bestow much labour or time about them, only I shall make known what I have proved, and what I do think.

And first, of Incising, which is the cutting of the bark of the Incising.
 boal, a Rine or Branch of a Tree at some bending, or knee shoulderwise with two gashes, only with a sharp knife to the wood; then take a wedge, the bigness of your graft, sharp ended, flat on the one side, agreeing with the Tree, and round on the other side, and with that being thrust in, raise your bark, then put in your graft, fashioned like your wedge just: and lastly, cover your wound, and fast it up, and take heed of straining. This will grow but to small purpose, for it is weak hold, and lightly it will be under growth. Thus you may graft betwixt the bark and the A great stock.
 tree of a great stock, that will not easily be chisled. But I have tried a better way for great trees, viz. First, cut him off straight, and cleanse him with your knife, then cleave him into four quarters equally with a strong cleaver; then take for every clift, two or three small (but hard) wedges, just of the bigness of your graft, and with those wedges driven in with a hammer, open the four clifts so wide, (but no wider) that they may take your four grafts with thrusting, not with straining. And lastly, cover and clay it cloosely, and this is a sure & good way of grafting: or thus, clift your stock by his edges twice or thrice with your cleaver, and open him with your wedge in every clift one by one, and put in your graft, and then cover them: This may do well.

Packing thus.
 Packing on, is, when you cut aslope, a twig of the same bigness, with your graft, either in or besides the knot, two inches long, and make your graft agree jump with the cyon, and gash your graft and your cyon in the middest of the wound, length-way, a straw breadth deep, and thrust the one into the other, wound to wound, sap to sap, bark to bark, then tie them close, and clay them: This may do well. The fairest graft I have in my little Orchard, which I have planted, is thus packt on, and the branch whereon I put him, is in his plentiful Root.

To be short in this point, cut your graft in any sort or fashion

two inches long, and joyn them cleanly, and close to any other sprig of any Tree in the latter end of the time of grafting, when sap is somewhat rise, and in all probability, they will close and thrive : thus,



The sprig.

The graft.

The twig.

The graft.

Or any other fashion you think good.

In. inoculating.

Innoculating is an eye, or bud, taken bark and all from one Tree, and placed in the room of another eye or bud of another ; cut both of one compass, and their bound. This must be done in Summer when the sap is proud.

Grafting in Scutcheon.

Much like unto this, is, that they call grafting in the Scutcheon, they differ thus: That here you must take an eye with his leaf, or (in mine opinion) a bud with his leaves. (Note that an eye is for a cyon, a bud is for flowers and fruit) and place them on another Tree, in a plain, (for they so teach) the place, or bark, where you must set it, must be thus cut with a sharp knife, and the bark raised with a wedge, and then the eye or bud put in, & so bound up, I cannot deny but such may grow. And your bud if he take, will flower, and bear fruit in that year, as some grafts, and sets also, being set for blooms. If these two kinds thrive, they reform but a spray, and an undergrowth. Thus you may place Roses, or Thorns, and Cherries on Apples, and such like. Many write much more of grafting, but to small purpose ; whom we leave to themselves, and their followers, and ending this secret, we come in the next Chapter to a point of knowledge, most requisite in an Arborist, as well for all other Woods, as for an Orchard.

CHAP. II.

Of the right dressing of Trees.

Necessity of dressing trees.

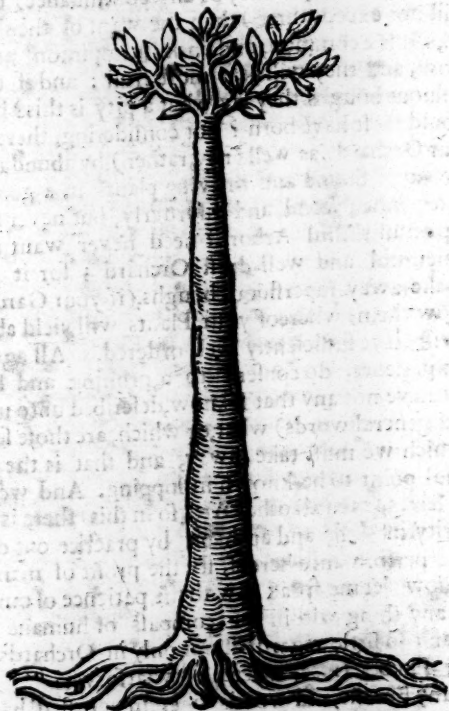
IF all these things aforesaid were indeed performed, as we have shew'd them in words, you should have a perfect Orchard, nature and substance, begun to your hand : and yet are all these things nothing, if you want that skill to keep and dress your Trees. Such is the condition of all earthly things, whereby a man receiveth profit, or pleasure, that they degenerate presently.

ly without good ordering. Man himself, left to himself, grows from his heavenly and spiritual generation, and becometh beastly, yea, devilish to his own kind, unless he be regenerate. No marvel then, if Trees make their shoots, and put their sprays disorderly. And truly (if I were worthy to judge) there is not a mischief that breedeth greater and more general harm to all the Orchard, (especially, if they be any continuance) that ever I saw, (I will not except three) than the want of the skilful dressing of trees. It is a common, and unskilful opinion, and saying, Let all grow, and they will bear more fruit: and if thou lop away superfluous boughs, they say, what a pity is this? how many Apples would these have born? not considering, there may arise General rule. hurt to your Orchard, as well (nay, rather) by abundance, as by want of wood. Sound and thriving plants in a good soil will ever yield too much wood, and disorderly, but never too little; So that a painful skilful Arborist need never want matter to effect a plentiful and well-drest Orchard; for it is an easie matter to take away superfluous boughs, (if your Gardiner have skill to know them) whereof your Plants will yield abundance, and skill will leave sufficiently well ordered. All ages, both by rule and experience, do consent to a pruning and lopping of Trees: yet have not any that I know, described unto us, (except in dark and general words) what, or which, are those superfluous boughs, which we must take away, and that is the chief and most needful point to be known in lopping. And we may well assure our selves, (as in all other Arts, so in this) there is a vantage and dexterity in skill, and an habit by practice out of experience, in the performance hereof, for the profit of mankind; yet do not I know (let me speak it with the patience of our cunning Arborists) any thing within the compass of humane affairs so necessary, and so little regarded, not only in Orchards, but also in all other Timber trees, where, or whatsoever.

How many Forests, and woods, wherein you shall have for one Timber-wood lively thriving Tree, four (nay, sometimes twenty four) evil evil drest, thriving, rotten, and dying Trees, even while they live? and in stead of trees, thousands of bushes and shrubs? What rottenness, what hollownes, what dead arms, withered tops, curtailed trunks? what loads of mosses, drooping boughs, and dying branch-

branches you shall see every where? And those that are like in this sort, are in a manner all unprofitable boughs, cankered arms, crooked, little and short boals; what an infinite number of bushes, shrubs, and skrogs of hazels, thorns, and other profitable wood, which might be brought by dressing to become great and goodly trees? Consider now the cause: The lesser wood hath been

The cause of
hurts in
woods.



Imagine the Root so be spread far wider.
spoyled with careles, unskillful, and untimely stowing, and much also of the great wood. The greater trees at the first rising have filled, and over-laden themselves with a number of wastfull boughs

boughs and suckers, which have not only drawn the sap from the boal, but also have made it knotty, and themselves and the boal mollic for want of dressing; whereas, if in the prime of growth they had been taken away close, all but one top (according to this pattern) and clean by the bulk, the strength of all the sap should have gone to the bulk, and so he would have recovered, and covered his knots, and have put forth a fair, long, and straight body, (as you see) for timber profitable, huge, great of bulk, and of infinite last.

Dress Timber Trees how.

If all Timber-trees we re such, (will some say) how should we have crooked wood for wheels, &c?

Answer. Dress all you can, and there will be enough crooked for those uses.

More then this, in most places, they grow so thick, that neither themselves, nor earth, nor any thing under or near them can thrive, nor Sun, nor Rain, nor Air can do them, nor any thing near or under them, any profit or comfort.

I see a number of Hags, where, out of one Root you shall see three or four, (nay, more, such is mens unskillful greediness, who desiring many, have none good) pretty Oaks, or Ashes, straight and tall; because the Root at the first shoot gives sap a main; but if one only of them might be suffered to grow, and that well and cleanly pruned, all to his very top, what a Tree should we have in time? And we see by those Roots, continually and plentifully springing, notwithstanding so deadly wounded, what a commodity should arise to the owner, and the Commonwealth, if wood were cherished, and orderly dressed.

The waste boughs closely and skillfully taken away, would give us store of fences and fuel, and the bulk of the Tree in time would grow of huge length and bigness. But here (me thinks) I hear an unskillful Arborist say, That Trees have their several

Profit of trees dressed.

forms, even by nature; the Pear, the Holly, the Aspe, &c. grow long in bulk, with few and little arms, the Oak by nature, broad, and such like. All this I grant, but grant me also, that there is a profitable end and use of every Tree, from which if it decline, (though by nature) yet man by art may (nay, must) correct it. Now other end of Trees, I could never learn, than good Timber, fruit much and good, and pleasure, uses Physical hinder nothing a good form.

The end of Trees.

Nei.

Trees will
take any form.

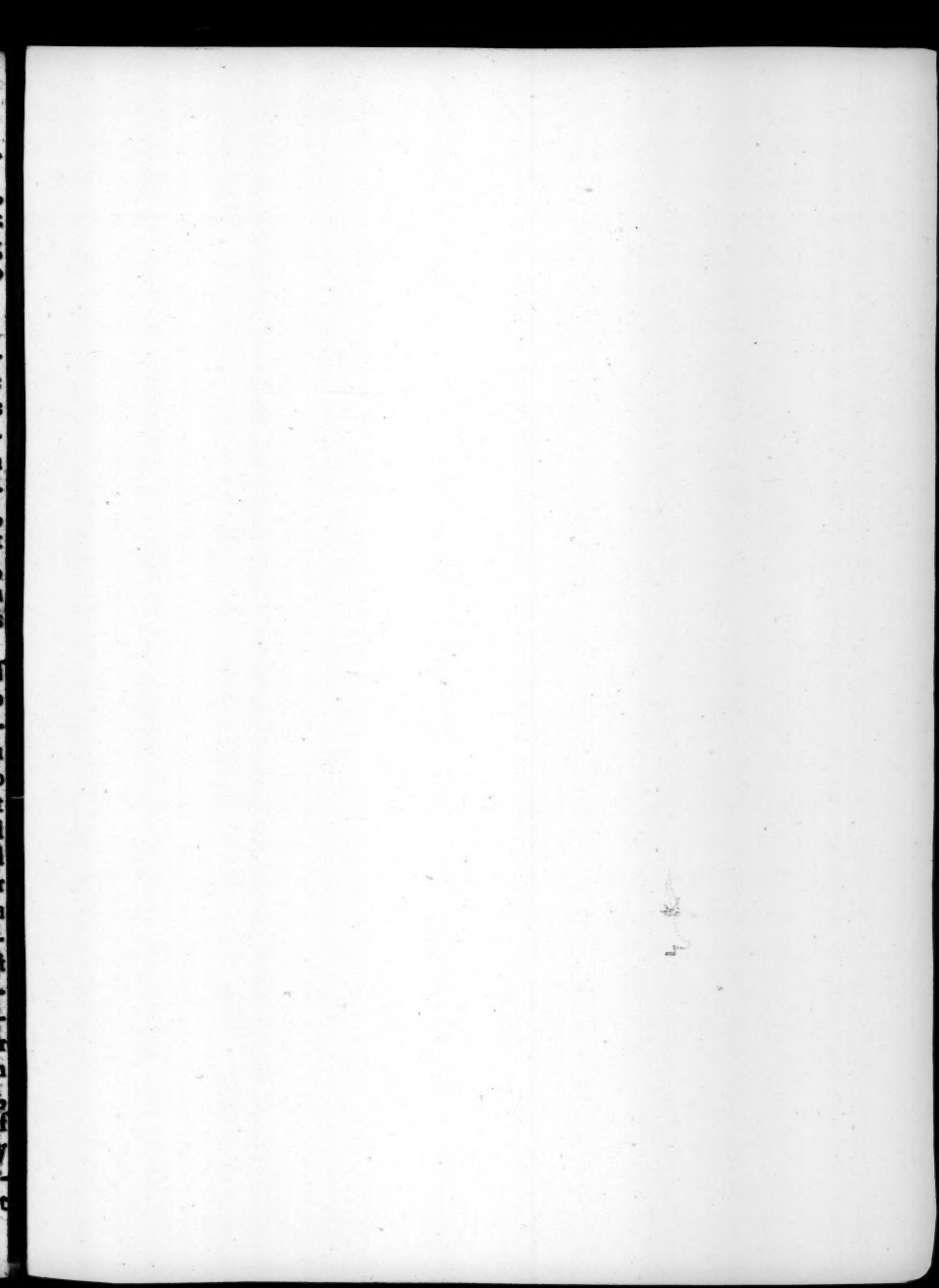
Neither let any man so much as think, that it is unprofitable, much less impossible, to reform any Tree of what kind soever: For (believe me) I have tried it, I can bring any tree (beginning betimes) to any form. The Pear and Holly may be made to spread, and the Oak to close.

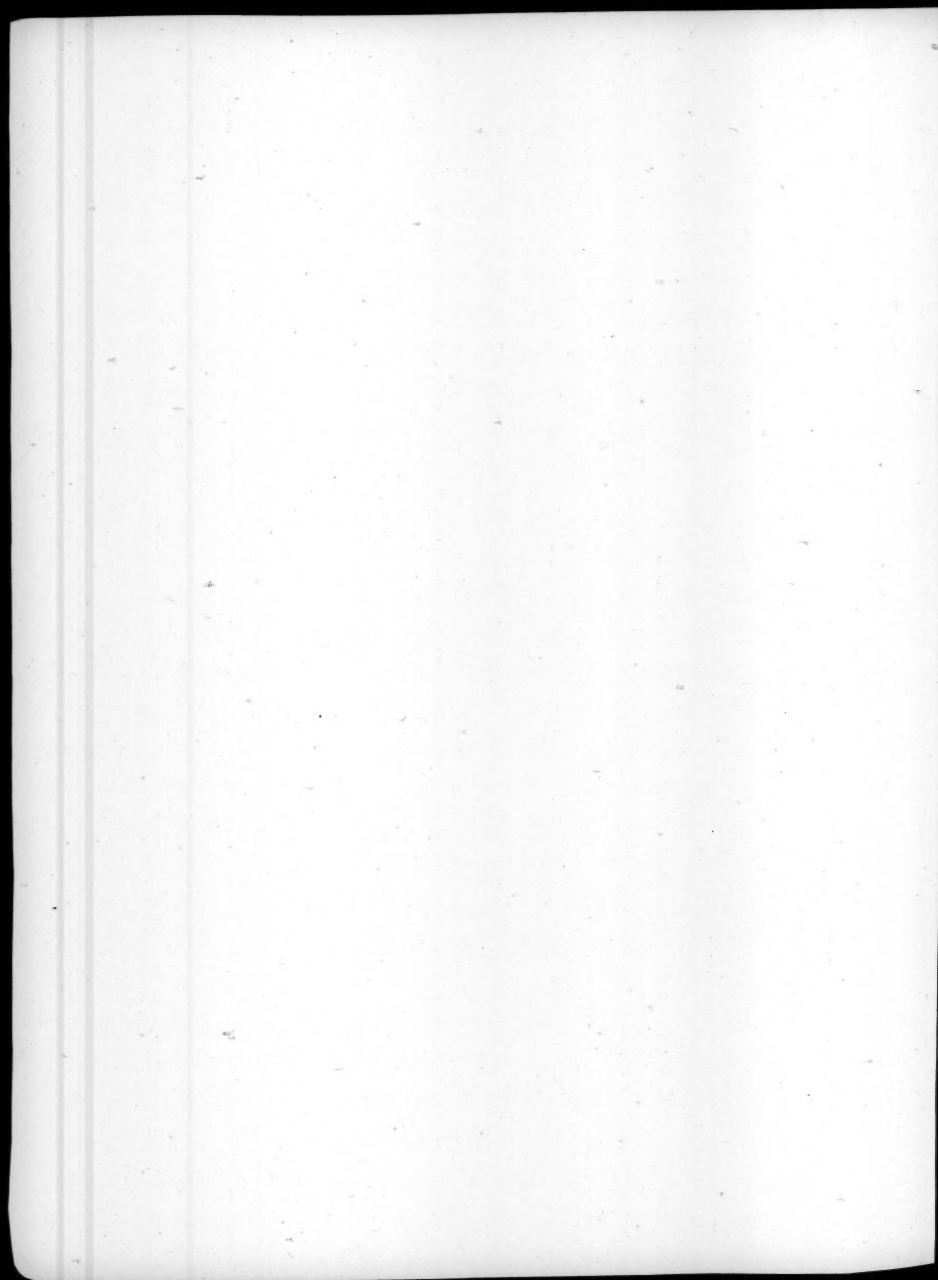
The end of
Trees.

But, why do I wander out of the compass of mine Orchard, into the Forrests and Woods? Neither yet am I from my purpose, if boals of timber-trees stand in need of all the sap, to make them great and straight, (for strong growth and dressing makes strong trees) then it must be profitable for fruit, (a thing more immediately serving a man's need) to have all the sap his Root can yield: for as timber, sound, great, and long, is the *good of Timber-trees*, and therefore they bear no fruit of worth: so fruit, good, sound, pleasant, great and much, is the *Fruit-trees end*. That Gardiner therefore, shall perform his duty skillfully and faithfully, which shall so dress his Trees, that they may bear such and such store of fruit, which he shall never do, (I dare undertake) unless he keep this order in dressing his Trees.

How to dress
a Fruit-tree.

A Fruit-tree so standing, that there need none other end of dressing but fruit, (not Ornaments, nor Walks, nor delight to such as would please their eye only, and yet the best form cannot but both adorn and delight) must be parted from within two foot or thereabouts of the earth, so high to give liberty to dress his Root, and no higher, for drinking up the sap that should feed his fruit, for the boal will be first, and best served and fed, because he's next the Root, and of greatest wax and substance, and that makes him longest of Life, into two, three, or four arms, as your stock or grafs yield twigs, and every arm into two or more branches, and every branch into his several cyons, still spreading by equal degrees, so that his lowest spray be hardly without the reach of a man's hands, & his highest be not past two yards higher, rarely, (especially in the midst) that no one twig touch his fellow. Let him spread as far as he list, without his master-bough, or lop equally. And when any bough doth grow sadder, and fall lower than his fellows, (as they will with weight of Fruit) ease him the next spring of his superfluous twigs, and he will rise; when any bough or spray shall amount above the rest, either snub his top with a nip be-
twixt





twixt your finger and your thumb, or with a sharp knife, and take him clean away, and so you may use any Cyon you would reform; and as your tree grows in stature, and in strength, so let him rise with his tops but slowly, and early, especially in the midst, and equally, and in breadth also; and follow him upward with lopping his under-growth and water boughs, keeping the same distance of two yards, but not above three in any wise, betwixt the lowest and the highest twigs.

1. Thus you shall have well liking, clean-skin'd, healthfull, great, and long-lasting trees. Benefits of good dressing. Remedy.

2. Thus shall your tree grow low, and safe from winds, for his top will be great, broad, and weighty.

3. Thus growing broad, shall your trees bear much fruit (I dare say) one as much as six of your common trees, and good without shadowing, dropping and fretting; for his boughs, branches, and twigs shall be many, and those are they (not the boal) which bear fruit.

4. Thus shall your boal being little (not small, but low) by reason of his shortness, take little, and yield much sap to fruit.

5. Thus your trees by reason of strength in time of setting shall put forth more blossoms and more fruit, because free from taints (for strength is a great help to bring forth much) and safely, whereas weakness fails in setting, though the season be calm.

Some use to bare trees Roots in Winter, to stay the setting till hotter seasons, which I discommend, because

1. They hurt the Roots.

2. It stays nothing at all.

3. Though it did, being small, with us in the North they have their part of our *April* and *May* Frosts.

4. Hinderance cannot profit weak trees in setting.

5. They waste much labour.

6. Thus shall your tree be easie to dress, and without danger, either to the tree or the dresser.

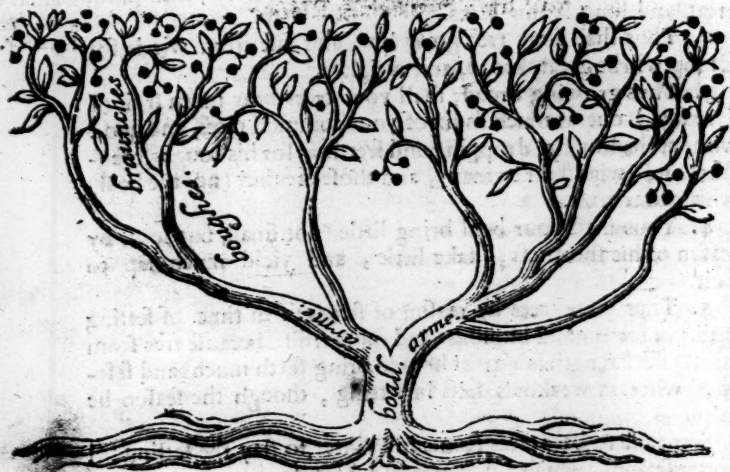
7. Thus may you safely and easily gather your fruit without falling, bruising, or breaking of Cyons.

This is the best form of a fruit-tree, which I have here shadowed

dowed out for the better capacity of them that are led more with the eye, then the mind, craving pardon for the deformity, because I am nothing skilful either in the painting or carving.

Imagine that the paper makes but one side of the tree to appear, the whole round compass will give leave for many more arms, boughs, branches, and cyons.

The perfect form of a Fruit-Tree.



If any tree cannot well be brought to this form: *Experto crede Roberto*, I can shew divers of them under twenty years of age.

The fittest time of the Moon for proynge, is, as of grafting, when the sap is ready to stir (not proudly stirring) and so to cover the wound: and of the year, a month before (or at least when) you graff. Dress Pears, Apricocks, Peaches, Cherries, and Bullis sooner. And old trees before young plants, you may dress at any time betwixt Leaf and Leaf. And note, where you take any thing away, the sap the next Summer will be putting: Be sure therefore when he puts a bud in any place where you would not have him, rub it off with your finger.

And

And here you must remember the common homely proverb : Dressing be-
Soon crooks the tree time.

That good Cannel must be.

Begin betimes with trees, and do what you list: but if you let them grow great and stubborn, you must do as the tree list. They will not bend but break, nor be wound without danger. A small branch will become a bough, and a bough an arm in bigness. Then if you cut him, his wound will fester, and hardly without good skill recover : therefore, *Obsta principiu*. Of such Faults of evil wounds, and lesser, or any bough cut off a handfull or more from dress trees, the body, comes hollowness, and untimely death. And there- and the reme- fore when you cut, strike close, and clean, and upward, and leave dy.
 no bunch.

This form in some cases sometimes may be altered : If your The form al- tree, or trees, stand near your walks, if it please your fancy more, tereth. let him not break till his boal be above your head ; so may you walke under your trees at your pleasure. Or if you set your fruit trees for your shades in your Groves, then I respect not the form of the tree, but the comeliness of the walk.

All this hitherto spoken of dressing, must be understood of Dressing of o- young plants, to be formed : it is meet somewhat be said for the trees. instruction of them that have old trees already formed, or rather deformed : for *Malum non vitatur nisi cognitum*. The faults therefore of a disordered tree, I find to be five.

1. An unprofitable boal.

2. Water boughs.

3. Fretters.

4. Suc'ers. And,

5. One principal top.

Faults are five, and the remedies.

A long boal asketh much feeding, and the more he hath the Long boal. more he desires, and gets, (as a drunken man drink, or a covetous man wealth,) and the less remains for the fruit: he puts his boughs into the air, and makes them, the fruit and it self more dangered with winds; for this I know no remedy, after that the No remedy: tree is come to growth; once evil, never good.

Water boughs, or under growth, are such boughs as grow Water low under others, and are by them over-grown, over-shadowed, boughs. dropped on, and pin'd for want of plenty of sap, and by that

means in time dye, for the sap presseth upward : and it is like water in her course, where it findeth most issue, thither it floweth, leaving the other less sluices dry, even as wealth to wealth, and much to more. These so long as they bear, they bear less, worse and fewer fruit, and waterish.

Remedy.

A pild. and
c. remedy.

The remedy is easie, if they be not grown greater than your arm, lop them close and clean, and cover the middle of the wound ; the next Summer when he is dry, with a Salve made of tallow, tarr, and a very little pitch, good for the covering of any such wound of a great tree : unless it be bark pild, and then a sear-cloth of fresh butter, honey and wax presently (while the wound is green) applyed, is a soveraign remedy, in summer especially. Some bind such wounds with a thumb Rope of hay, moist, and rub it with dung.

Fretters.

Touching.

Remedy.

Fretters are, when as by negligence of the Gardner, two or more parts of the tree, or of divers trees, as arms, boughs, branches, or twigs, grow so near and close together, that one of them by rubbing doth wound one another. This fault of all other shews the want of skill (or care at least) in the arborist : for here the hurt is apparent, and the remedy easie, seen to betimes : galls are wounds incurable, but by taking away those members, for let them grow, and they will be worse and worse, and so kill themselves with civil strife for Roomth, and danger the whole tree. Avoid them betime therefore, as a Common-wealth doth bofome enemies.

Suckers.

A Sucker is a long, proud, and disorderly Cyon, growing freight up (for pride of sap makes proud, long, and freight growth) out of any lower parts of the tree, receiving a great part of the sap, and bearing no fruit, till it have tyrannized over the whole tree. These are like idle and great Drones amongst Bees, and proud and idle members in a Common-Wealth.

The Remedy of this is, as of water boughs, unless they be grown greater than all the rest of the boughs ; and then your Gardner (at your discretion) may leave him for his boal, and take away all, or the most of the rest. If he be little slip him, and for him, perhaps he will take : my fairest Apple-tree was such a slip.

One principal
top or bough,
and Remedy.

One or two principal top boughs are as evil in a manner as suckers ; they rise of the same cause, and receive the same Remedy :

medy: yet these are more tolerable, because these bear fruit, yea, the best; but Suckers of long time do not bear.

I know not how your tree should be faulty, if you reform all your vices timely, and orderly. As these Rules serve for dressing young trees, and sets in the first setting, so may they well serve to help old trees, though not exactly to cure them.

The instruments fittest for all these purposes, are most commonly, for the greatest trees, an handsome, long, light Ladder of Firpole, a little, nimble, and strong armed Saw, and sharp. For less trees, a little and sharp hatchet, a broad mouthed Chisel, strong and sharp, with an hand beetle, your strong and sharp Clever, with a knock, and (which is almost necessary instrument amongst little trees) a great hasted and sharp knife or whittle. And as needful is a Stool on the top of the Ladder of eight or more rungs, with two back feet, whereon you may safely, and easily stand to graff, to daels, and to gather fruit, thus formed. The feet may be fast wedged in, but the Ladder must hang loose with two bands of Iron: and thus much of dressing trees for fruit, formally to profit.

Instruments
for dressing.



CHAP. XII.

Of Soyling.

There is one thing yet very necessary for to make your Orchard both better, and more lasting: Yea, so necessary, that without it your Orchard cannot last, nor prosper long, which is neglected generally both in precepts and in practice, *viz.* manuring with soyl: whereby it hapneth that when trees (amongst other evils) through want of fatness to feed them, become infertile, and in their growth are evil (or not thriving) it is either attributed to some wrong cause, as age (when indeed they are but young) or evil standing (stand they never so well) or such like; or else the cause is altogether unknown, and so not amended.

Necessity of
soyling.

Can there be devised any way by nature, or art, sooner or Trees great soundlier to suck out, and take away the heart of earth, then by great trees; such great bodies cannot be sustained without great store of sap: what living body have you greater then of Trees; the great Sea monsters (whereof one came to land at Teese mouth in

Suckers.

in *Yorkshire*, hard by us, 18 yards in length, and near as much in compass) seem hideous, huge, strange, and monstrous, because they be indeed great, but especially, because they are seldom seen: but a tree liking, come to his growth and age, twice that length, and of a bulk never so great, besides his other parts, is not admired, because he is so commonly seen. And doubt not, but if he were well regarded from his kernel, by succeeding ages to his full strength, the most of them would double their measure. About fifty years ago, I heard by credible and constant reports, That in *Brookham-Park* in *Westmerland*, neer unto *Penrich*, there lay a blown Oak, whose trunk was so big, that two Horse-men being the one on the one side, and the other on the other side, they could not see one another: to which, if you add his arms, boughs, and roots, and consider of his bigness, what would he have been, if preserved to the vantage? Also I read in the History of the *West-Indians*, out of *Peter Martyr*, that fifteen men taking hands, one with another, were not able to fathom one of those trees about. Now nature having given to such, a faculty by large and infinite Roots, taws and tanglers, to draw immediately his sustenance from our common mother the earth (which is like in this point to all other mothers that bear) hath also ordained, that the tree over-laden with fruit, and wanting sap to feed all she hath brought forth, will wean all she cannot feed, like women bringing forth more Children at once, than she hath teats. See you not how trees, especially, by kind being great, standing so thick and close, that they cannot get plenty of sap, pine away all the grass, weeds, lesser shrubs and trees, yea, and themselves also, for want of vigour of sap? so that trees growing large, sucking the soyl whereon they stand continually and amain, and the soizon of the earth that feeds them decaying (for what is there that wastes continually, that shall not have an end?) must either have supply of sucking, or else leave thriving and growing. Some grounds will bear Corn while they be new, and no longer, because their crust is shallow, and not very good, and lying they scind and wash and become barren. The ordinary Corn soyls continue not fertile, without fallowing and soyling, and the best requires supply even for the little body of Corn. How then can we think that a

ny Ground, how good soever, can sustain bodies of such greatness, and such great feeding, without great plenty of sap arising from good earth? This is one of the chief causes why so many of our Orchards in *England* are so evil thriving when they come to growth, and our fruit so bad. Men are loath to bestow much ground, and desire much fruit, and will neither set their trees in sufficient compass, nor yet feed them with manure. Therefore of necessity Orchards must be soyled.

The fittest time is, when your trees are grown great, and have near hand spread your earth, wanting new earth to sustain them, which if they do, they will seek abroad for better earth; and shun that which is barren (if they find better) as cattle evil pasturing. For nature hath taught every creature to desire and seek his own good, and to avoid hurt. The best time of the year is at the fall, that the frost may bite and make it tender, and the Rain wash it into the Roots. The Summer-time is perilous if ye dig, because the sap stirs again. The best kind of Soyl is such as is fat, hot, and tender. Your earth must be lightly opened; that the Dung may go in, and wash away; and but shallow, lest you hurt the Roots; and in the spring, closely and equally made plain again for fear of Suckers. I could wish, that after my trees have fully possessed the soyl of mine Orchard, that every seven years at least, the soyl were bespread with dung half a foot thick at least. Puddle water out of the Dunghil poured out plentifully, will not only moisten but fatten exceedingly in *June* and *July*. If it be thick and fat, and applied every year, your Orchard shall need none other soyling. Your ground may lie so low at the River side, that the flood standing some days and nights thereon, shall save you all this labour of soyling.

C H A P. XIII.

Of Annoyances.

A Chief help to make every thing good, is to avoid the evil thereof: you shall never attain to that good of your Orchard you look for, unless you have a Gardiner that can discern the diseases of your trees, and other annoyances of your Orchard, and find out the causes thereof, and know and apply fit Remedies for the same. *For be your ground such plants and trees as you would wish, and if they be wasted with hurtful things, what have*

have you gained, but your labour for your travel? It is with an Orchard and every tree, as with man's body. The best parts of Physick for preservation of health, is to foresee and cure diseases.

Two kinds of evils in an Orchard.

All the diseases of an Orchard are of two sorts, either internal, or external. I call those inward hurts which breed on, and in, particular trees.

- | | |
|------------------------|------------------|
| 1 Galls, | 5 Bark bound. |
| 2 Canker. | 6 Bark pil'd. |
| 3 Moss. | 7 Worm. |
| 4 Weakness in setting. | 8 Deadly wounds. |

Galls.

Galls, Cankers, Moss, Weakness, though they be divers diseases, yet (howsoever authors think otherwise) they rise all out of the same cause.

Galls we have described with their cause and remedy, in the eleventh Chapter under the name of fretters.

Canker.

Canker is the consumption of any parts of the tree bark and wood; which also in the same place is deciphered under the title of water-boughs.

Moss.

Moss is sensible seen and known of all, the cause is pointed out in the same Chapter, in the discourse of timber-wood, and partly also the remedy: but for Moss add this, that any time in summer (the Spring is best, when the cause is removed) with an Hair cloth immediately after a shower of rain, rub off your Moss, or with a piece of wood (if the moss abound) formed like a great knife.

Weakness in setting.

Weakness in the setting of your fruit shall you find there also in the same Chapter, and his remedy. All these flow from the want of Roomth in good soyl, wrong planting, Chapter seven, and evil, or no dressing.

Bark bound.

Bark bound as I think riseth of the same cause, and the best and present remedy (the causes being taken away) is with your sharp knife in the spring, length way to launce his bark throw-out 3 or 4 sides of his boal.

Worm.

The disease called the worm is thus discerned: the bark will be hollow in divers places like gall, the wood will dye and dry, and you shall see easily the bark swell: it is verily to be thought that therein is bred some Worm. I have not yet thorowly sought it out, because I was never troubled therewithall; but

only

onely have seen such trees in divers places : I think it a Worm rather, because I see this disease in trees, bringing fruit of sweet taste, and the swelling shews as much. The remedy, (as I conjecture) is, so soon as you perceive the wound, the next Spring cut it out, bark and all, and apply Cows piss and vinegar presently, and so twice or thrice a week, for a monthspace : For I well perceive, if you suffer it any time, it eats the Tree or Bough round, and so kills. *Since I first wrote this Treatise, I have changed my mind concerning the disease called the Worm, because I read in the History of the West-Indians, that their Trees are not troubled with the disease called the Worm, or Canker, which ariseth of a raw and evil concocted humour, or sap. Witness Pliny, by reason the Country is more hot then ours ; wherefore I think the best remedy is, (not disallowing the former, considering that the Worm may breed by such an humour) warm standing, sound lopping, and good dressing.*

Bark-pill'd, you shall find with his remedy, in the eleventh Chapter.

Deadly wounds are, when a man's *Arborist* wanting skil, cuts off arms, boughs or branches an inch, or (as I see sometimes) an handfull, or half a foot or more from the body : *These so cut, cannot cover in any time with sap, and therefore they dye, and dying they perish the heart, and so the tree becomes hollow, and with such a deadly wound cannot live long.*

The remedy is, if you find him before he be perished, cut him close, as in the 11. Chapter : If he be hoal'd, cut him close, fill his wounds though never so deep, with mortar well tempered, and so close at the top his wound with a Sear-cloth nailed on, that no Air nor Rain approach his wound. If he be very old, and declining, he will recover ; and the hole being closed, his wound within shall not hurt him for many years.

Hurts on your trees are chiefly, Ants, Earwigs, and Caterpillars. Of Ants, and Earwigs, is said, chap. 10. *Let there be no swarm of piss-mire neer your tree roots, no, not in your Orchard : turn them over in a frost, and pour in water, and you kill them.*

For Caterpillars, the vigilant Fruiterer shall soon espy their lodging by their web, or the decay of leaves eaten round about them : And being seen, they are easily destroyed with your hand,

or rather (if your tree may spare it) take sprig and all: for the red speckled Butter-fly doth ever put them, being her sperm, among the tender sprays for better feeding, especially in drought: and tread them under your feet. I like nothing of smoak among trees. Unnatural heats are nothing good for natural trees. *This, for Diseases of particular trees.*

External hurts are either things natural, or artificial. Natural things, externally hurting Orchards.

- | | | | |
|-----------|-----------|-----------|---------------|
| I Beasts. | 1 Deer. | II Birds. | 1 Bulfinch. |
| | 2 Goats. | | 2 Thrush. |
| | 3 Sheep. | | 3 Black-bird. |
| | 4 Hare. | | 4 Crow. |
| | 5 Cony. | | 5 Pye, |
| | 6 Cattel. | | &c. |
| | 7 Horse. | | |

The other things are.

- | |
|--------------------|
| 1 Winds. |
| 2 Cold. |
| 3 Trees. |
| 4 Weeds. |
| 5 Worms. |
| 6 Moles. |
| 7 Filth. |
| 8 Poysonful smoak. |

External wilful evils are these.

- | | |
|---|---------|
| 1 Walls. | |
| 2 Trenches. | |
| 3 Other works noisome, done in or near your Or- | |
| 4 Evil Neighbours. | (chard. |
| 5 A careless Master. | |
| 6 An undiscree, negligent, or no keeper. | |

See you here an whole Army of mischiefs banded in troops against the most fruitful trees the earth bears: assailing your good labours. Good things have most enemies.

A skilful Fruiterer must put to his helping hand; and disband, and put them to flight.

For the first rank of beasts, besides your out-strong fence, you must have a fair and swift Grey-hound, a Stone-bow, Gun, and

if

Remedy.

Deer, &c.

if need require, an Apple with an hook for a Deer, and an Hare-pipe for an Hare.

Your Cherries, and other Berries, when they be ripe, will draw all the Black-birds, Thrushes, and Mag-pies, to your Orchard. Birds. The Bul-finch is a devourer of your fruit in the bud, I have had whole Trees shall'd out with them in Winter time.

The best remedy here is a Stone-bow, a Piece, especially if you have a musket, or sparrow-hawk in winter, to make the Black-bird stoop into a bush, or hedge.

The Gardner must cleanse his soil of all other trees, but fruit-trees, as aforesaid, chap. 2, for which it is ordained; and I would especially name Oaks, Elms, Ashes, and such other great wood, but that I doubt it would be taken as an admission of lesser trees; for I admit of nothing to grow in my Orchard but fruit and flowers: if sap can hardly be good to feed our fruit-trees, should we allow of any other? especially those that will become their Masters, and wrong them in their lively-hood?

And enough we admit without the fence, of wall-nuts in most plain places, Trees middle-most and Ashes, or Oaks, or Elms ut-most, set in comely rows equally distant, with fair Allies twixt row and row, to avoid the boisterous blasts of winds, and within them also others for bees, yet we admit none of these into your Orchard plat; other remedies then this have we none against the nipping frost. Winds. Frosts.

Weeds in fertile soil, (because the general course is so) till your trees grow great, will be noisome, and deform your allies, walks, beds, and squares; your under gardeners must labour to keep all cleanly, and handsome from them, and all other filth, with a spade, weeding knives, rake with Iron teeth, a scruple of Iron thus formed. Weeds.

For Nettles, and ground Ivy after a blow.

When weeds, straw, sticks, and all other scrapings are gathered together, burn them not, but bury them under your crust in any place of your Orchard, and they will dye, and fatten your ground.

Worms.
Moals.

Remedy.

Worms and Moals open the earth, and let in air to the Roots of your trees, and deform your Squares and walks; and feeding in the earth, being in number infinite, draw on barrenness.

Worms may easily be destroyed. Any Summer evening, when it is dark, after a shower with a candle you may fill bushels; but you must tread nimbly, and where you cannot come to catch them, so sift the earth with coal-ashes an inch or two thickness, and that is a plague to them, so is sharp gravel.

Moals will anger you if your Gardiner or some other moal-catcher ease you not; especially, having made their fortresses among the Roots of your Trees; you must watch her well with a Moal-spear, at morning, noon, and night: when you see her utmost hill, cast a trench betwixt her and her home, for she hath a principal mansion to dwell and breed in about April, which you may discern by a principal hill, wherein you may catch her, if you trench it round, and sure, and watch well; or wheresoever you can discern a single passage, (for such she hath) there trench, and watch, and have her.

Willall annoyances must be prevented, and avoided by the love of the Master, and Fruiterer, which they bear to their Orchard.

Justice and liberality will put away evil neighbours, or evil neighbour-hood. And then, (if God bless and give success to your labours) I see not what hurt your Orchard can sustain.

CHAP. XIV.

The age of Trees.

IT is to be considered, All this treatise of Trees tends to this end, that men may ~~love and plant~~ *plant* Orchards, whereunto there cannot be a better ~~placement~~ *placement* then that they know, (or at least be perswaded) that all the benefit they shall reap thereby, whether of pleasure, or profit shall not be for a day, or a month, or one, or many, but many hundred years. Of good things, the greatest, and most durable, is always the best. If therefore, out of reason, grounded upon experience, it be made (I think) manifest, but I am sure profitable, that a fruit-tree in such a soyl and

and site, as is described, so planted and trimmed, and kept as is afore appointed, and duly soiled, shall dure a thousand years: Why should not we take pains, and be at two or three years charges, (for under seven years will an Orchard be perfected for the first planting, and by that time be brought to fruit) to reap such a commodity, and so long lasting? *but, easy might*

Let no man think this to be strange, but peruse, and consider the reason. I have Apple-trees standing in my little Orchard, which I have known these forty years, whose age before my time I cannot learn, it is beyond my memory, though I have inquired of divers aged men of 80 years and upwards: These trees, although come into my possession very ill ordered, and mishapen, and one of them wounded to his heart, and that deadly, (for I know it will be his death) with a wound, wherein I might have put my foot into the heart of his bulk, (how it is left), notwithstanding, with that small regard they have had since; they so like, that I assure my self they are not come to their growth by more than two parts of three, which I discern not only by their own growth, but also by comparing them with the bulk of other trees. And I find them shord (at least) by so many parts in bigness, although I know those other Fruit-trees to have been much hindered in their stature by evil guiding. Here hence I gather thus:

If my trees be a hundred years old, and yet want two hundred of their growth before they leave increasing, which make three hundred, then must we needs resolve, that this three hundred years are but the third part of a trees life: because, (as all things living besides) so trees must have allowed for them for their increase one third; another third for their stand, and a third part of time also for their decay. All which time of a tree amounts to nine hundred years, three hundred for increase, three hundred for his stand, whereof we have the term [stature] and three hundred for his decay: and yet I think, (for we must conjecture by comparing, because no one man liveth to see the full age of trees) I am within the compass of his age, supposing always the fore-said means of preserving his life. Consider the age of other living Creatures: The Horse, and moid One wrought to an untimely death, yet double the time of their increase.

The age of Trees.

Gathered by reason out of experience.

Part of a trees age.

Man's age.

crease. A dog likewise increaseth three, stands three at least, and in as many (or rather more) decays.

Every living thing bestows the least part of his age in his growth, and so it must needs be with trees. A man comes not to his full growth and strength (by common estimation) before thirty years, and some slender and clean bodies, not till forty: so also so long stands his strength, and so long also must he be allowed by course of nature to decay: Ever supposing that he be well kept with necessaries, and from, and without strains, bruises, and all other domineering diseases. I will not say upon true report, that Physick holds it possible, that a clean body kept by these three Doctors, *Doctor Diet*, *Doctor Quiet*, and *Doctor Merryman*, may live near a hundred years: Neither will I here urge the long years of *Methuselah*, and those men of that time, because you will say, Man's days are shortened since the flood. But, what hath shortened them? God, for man's sins; but, by means, as want of knowledge, evil Government, Riot, Gluttony, Drunkenness, and (to be short) the increase of the Curse, our sins increasing in an Iron and wicked age.

Now, if a man, whose body is nothing (in a manner) but tender rottenness, whose course of life cannot by any means, by Counsel, restraint of Laws, or Punishment, nor hope of Praise, Profit, or eternal Glory, be kept within any bounds, who is degenerate clean from his natural feeding, to effeminate niceness, and cloying his body with excess of meat, drink, sleep, &c. and to whom nothing is so pleasant, and so much desired, as the causes of his own death, as idleness, lust, &c. may live to that age: I see not but a tree of a solid substance, not dammed by heat, or cold; capable of, and subject to any kind of ordering, or dressing, that a man shall apply unto him, feeding naturally, as from the beginning, disburthened of all superfluities, eased of, and of his own accord, avoiding the causes that may annoy him, should double the life of a man more than twice told: and yet natural Philosophy, and the universal consent of all Histories tell us, That many other living Creatures far exceed man in length of years: As the Hart, and the Raven. Thus reporteth that famous *Rodericus* out of *Hesiodus*, and many other Historiographers. The testimony of *Silvius* in his Book *De Senectute* is weighty in this

this

this purpose, that we must in *posteris ætates ferere arbores*, which can have none other sence, but, that our Fruit-Trees, whereof he speaks, can endure for many ages.

What else are trees, in comparison with the earth, but as hairs to the body of a man? And it is certain, without poisoning, evil, and distemperate dyet, and usage, or other such forcible cause, the hairs dure with the body. That they be called excrements, it is by reason of their superfluous growth: (for cut them as often as you list, and they will still come to their natural length) not in respect of their substance and nature. Hairs endure long, and are an ornament, and of use also to the body, as trees to the earth.

So that I resolve upon good reason, that Fruit-trees well ordered, may live and like a thousand years, and bear fruit; and the longer, the more, the greater, and the better, because his vigour is proud and stronger, when his years are many. You shall see old trees put forth their buds, and blossoms, both sooner and more plentiful than young trees, by much. And I sensibly perceive my young trees to enlarge their fruit as they grow greater, both for number and greatness. Young Heifers bring not forth Calves so fair, neither are they so plentiful to milk, as when they come to be old Kine. No good House-wife will breed of a young, but of an old breed-mother: It is so in all things naturally, therefore in trees.

And if Fruit-trees last to this age, how many ages is it to be supposed, strong, and huge Timber-trees, will last? whose huge bodies require the years of divers *Meibuselabs*, before they end their days, whose sap is strong and bitter, whose bark is hard and thick, and their substance solid and stiff: all which are defences of health, and long life. Their strength withstands all forcible winds; their sap of that quality is not subject to worms and tainting; their bark receives seldom or never by casualty, any wound: And not only so, but he is free from removals, which are the death of millions of trees; whereas the Fruit tree in comparison, is little, and often blown down, his sap sweet, easily, and soon tainted, his bark tender, and soon wounded, and himself used by man, as man useth himself, that is, either unskillfully, or carelessly.

Age of trees
discerned.

It is good for some purposes, to regard the age of your fruit-trees, which you may easily know, till they come to accomplish twenty years; by his knots: Reckon from his Root upward an arm, and so to his top twig, and every years growth is distinguished from other by a knot, except lopping or removing do hinder.

CHAP. XV.

Of gathering and keeping Fruit.

General rule:

Although it be an easie matter, when God shall send it, to gather and keep fruit, yet are there certain things worthy your regard: You must gather your fruit when it is Ripe, and not before, else will it wither, and be tough and sour. All fruits generally are Ripe, when they begin to fall: For trees do as all other bearers do, when their young ones are Ripe, they will wain them. The Dove her Pidgeons, the Coney her Rabbits, and Women their Children. Some fruit-trees sometimes getting a taint in the feeding, with a frost, or evil wind, will cast their fruit untimely, but not before they leave giving them sap, or they leave growing. Except from this fore-said rule, Cherries, Damsons, and Bullis. The Cherry is Ripe when he is swelled, wholly Red, and sweet Damsons and Bullis not before the first frost.

Cherries, &c.

Apples.

Apples are known to be Ripe, partly by their colour, growing towards a yellow, except the Leather-coat, and some Pears, and Greenings.

When.

Timely Summer-fruit will be ready, some at Midsummer, moister at Lammas for present use; but generally, no keeping fruit before Michaelide. Hard winter fruit, and Wardens longer.

Gather at the fall of the Moon, for keeping, gather dry for fear of Rotting.

Dry stalks.

Gather the stalks withal, for a little wound in fruit is deadly; but not the stump, that must bear the next fruit; nor leaves, for moisture putrefies.

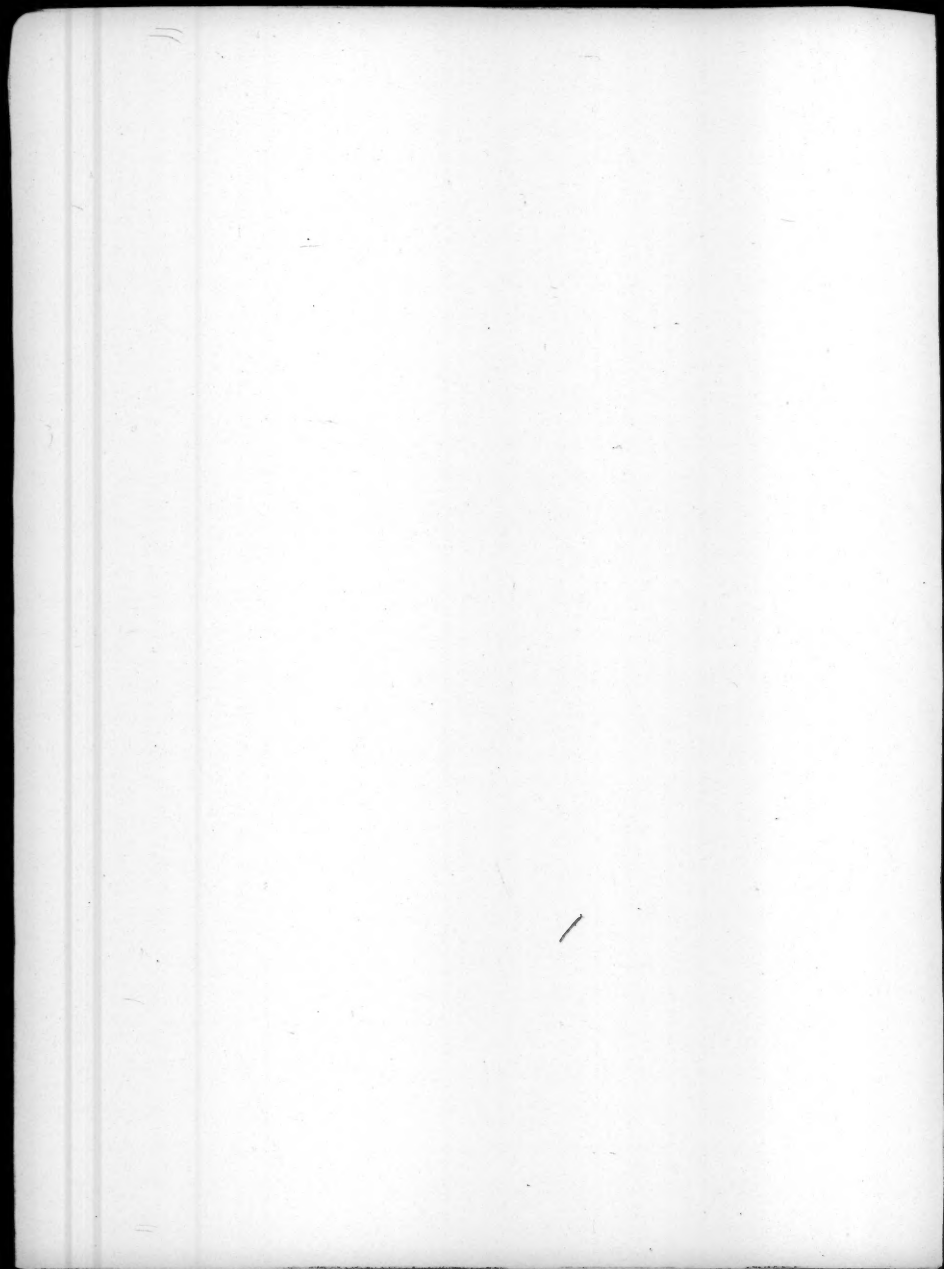
Severally.

Gather every kind severally by it self, for all will not keep alike, and it is hard to discern them, when they are mingled.

Over-laden
trees.

If your trees be over-laden, (as they will be, being ordered, as is before taught) I like better of pulling some off, (though they be





be not ripe) near the top of the Bough, then of propping by much, the rest shall be better fed. Propping puts the boughs in danger, and frets it at least.

Instruments: A long Ladder of light Fir, a Stool ladder, as in the eleventh Chapter. A gathering-apron like a poak before you, made of purpse, or a Wallet hung on a bough, or a basket with a sieve bottom, or skin bottom, with lathes or splinters under, hung in a rope to pull up and down: bruise none, every bruise is to fruit death; if you do, use them presently. An hook to pull boughs to you is necessary. Break no boughs.

For keeping, lay them in a dry loft, the longest-keeping Apples Keeping, first and furthest on dry straw, on heaps, ten or fourteen days, thick, that they may sweat. Then dry them with a soft and clean cloth, and lay them thin abroad. Long-keeping fruit would be turned once in a month softly; but not in, nor immediately after frost. In a loft, cover'd well with straw, but rather with chaff or bran: For frost doth cause tender rottenness.

CHAP. XVI.

Of Profits.

NOW pause with your self, and view the end of all your Labours in an Orchard: unspeakable pleasure, and infinite commodity. The pleasure of an Orchard I refer to the last Chapter, for the conclusion; and in this Chapter, a word or two of the profit, which thorowly to declare is past my skill; and I account it as if a man should attempt to add light to the Sun with a candle, or number the Stars. No man that hath but a mean Orchard or judgment but knows, that the commodity of an Orchard is great: Neither would I speak of this, being a thing so manifest to all; but that I see, that through the carelessness of men, it is a thing generally neglected. But let them know, that they lose hereby the chiefest good which belongs to house-keeping.

Compare the Commodity that cometh of half an acre of ground, set with Fruit-trees and Herbs, so as is prescribed, and a whole acre (say it be two) with corn, or the best commodity you can with, and the Orchard shall exceed by divers degrees.

In France, and some other Countries, and in England, they make great use of Cyder and Perry, thus made: Dresse every Perry, Apple, the stalk, upper-end and all galls away, stamp them, and

strain them, and within twenty four hours run them up into clean, sweet, and sound vessels, for fear of evil air, which they will readily take: and if you hang a poackful of Cloves, Mace, Nutmegs, Cinnamon, Ginger, and peels of Lemmons in the midst of the Vessel, it will make it as wholsome and pleasant as Wine. The like usage doth Perry require.

These drinks are very wholsome, they cool, purge, and prevent hot Agues. But this skill I leave to Physicians.

Fruit.

The benefit of your Fruit, Roots, and Herbs, though it were but to eat and sell, is much.

Water.

Water distilled of Roses, Woodbind, Angelica, are both profitable, and wondrous pleasant, and comfortable. Saffron and Lignoras will yield you much.

Conserve.

Conserve, and Preserves, are Ornaments to your Feasts, health in your Sickness, and a good help to your friend, and to your Purse.

He that will not be moved with such unspeakable profits, is well worthy to want, when others abound in plenty of good things.

CHAP. xvii.

Ornaments.

ME-thinks hitherto we have but a bare Orchard for fruit, and but half good, so long as it wants those comely Ornaments that should give beauty to all our labours, and make much for the honest delight of the owner and his friends.

For it is not to be doubted, but as God hath given man things profitable, so hath he allowed him honest comfort, delight, and recreation in all the works of his hands. Nay, all his labours under the Sun without this are troubles, and vexations of mind: For what is greedy gain without delight, but molling, and tumbling in slavery? But comfortable delight, with content, is the good of every thing, and the pattern of Heaven. A morsel of bread with comfort, is better by much than a fat Oxe with uneasiness. And who can deny but the Principal end of an Orchard, is the honest delight of one wearied with the work of his lawful calling? The very works of, and in an Orchard and Garden, are better than the ease and rest of, and from other labours. When God had made a man after his own

Image,

Delight the
chief end of
Orchards.

An Orchard
delightful.

Images, in a perfect state, and would have him to represent himself in authority, tranquillity, and pleasure upon the earth, he placed him in *Paradise*. What was *Paradise*? but a Garden, an Orchard of Trees and Herbs, full of pleasure, and nothing there but delights. The gods of the earth resembling the great God of Heaven in Authority, Majesty, and abundance of all things, wherein is their most delight? and whither do they withdraw themselves from the troublesome affairs of their estate, being tired with the hearing and judging of litigious Controversies, choaken (as it were) with the close air of their sumptuous Buildings, their stomachs cloyed with variety of Banquets, their ears filled and over-burthened with tedious discourtings? Whither, but into their Orchards, made and prepared, dressed and delineated for that purpose, to renew and refresh their senses, and to call home their over-wearied spirits? Nay, it is (no doubt) a comfort to them, to set open their easements into a most delicate Garden and Orchard, whereby they may not only see that, wherein they so much delighted, but also to give fresh, sweet and pleasant air to their Galleries and Chambers.

An Orchard
in Paradise.

Cause of wear
risonness.

Orchard is the
remedy.

And look what these men do by reason of their greatness and ability, provoked with delight, the same doubtless would every of us do, if power were answerable to our desires; whereby we shew manifestly, that of all other delights on earth, they that are taken by Orchards are most excellent, and most agreeing with nature.

All delights in
Orchards.

For whereas every other pleasure commonly fills some one of our senses, and that only with delight; this makes all our senses swim in pleasure, and that with infinite variety, joyed with no less commodity.

This delights
all the senses.

That famous Philosopher, and matchless Orator, *M. T. C.* prescribeth nothing more fit, to take away the tediousness of three or four score years, than the pleasures of an Orchard.

Delighteth old
age.

What can your eye desire to see, your ears to hear, your mouth to take, or your nose to smell, that is not to be had in an Orchard, with abundance of variety? What more delightful than an infinite variety of sweet smelling flowers, decked with sundry colours, the green mantle of the earth, the universal mo-

Causes of de-
light in any
Orchard.

ther of us all, so by them bespotted, so died, that all the World cannot sample them, and wherein it is more fit to admire the Dyer, than imitate his Workmanship, colouring not only the earth, but decking the air, and sweetning every breath and spirit.

Flowers.

The Rose red, Damask, Velvet, and double double Province-Rose, the sweet Musk-Rose double and single, the double and single white-Rose: The fair and sweet-scenting Woodbine, double and single, and double double. Purple Cowslips, and double Cowslips, and double double Cowslips: Primrose double and single. The Violet nothing behind the best, for smelling sweetly. A thousand more will provoke your content.

Borders and Squares.

And all these by the skill of your Gardiner, so comelily and orderly placed in your borders and squares, and so intermingled, that one looking thereon, cannot but wonder to see, what Nature, corrected by Art, can do.

Mounts.

When you behold in divers corners of your Orchard Mounts of stone or wood, curiously wrought within and without, or of earth covered with Fruit-trees, Kentish Cherries, Damsons, Plums, &c. with stairs of precious workmanship; and in some corner (or more) a true Dial or Clock, and some Antick works; and especially silver-sounding Musick, mixt Instruments, and Voices, gracing all the rest: How will you be wrapt with Delight!

Whence you
may shoor a
Buck.
Dial.
Musick.

Walks.
Seats.

Large Walks, broad and long, close and open, like the *Tempe*-groves in *Thessaly*, raised with gravel and sand, having seats and banks of Camomile; all this delights the mind, and brings health to the body.

Order of trees.

View now with delight the works of your own hands, your Fruit-trees of all sorts, loaden with sweet blossoms, and fruit of all tastes, operations, and colours: your trees standing in comely order, which way soever you look.

Your borders on every side hanging and dropping with Fe-berries, Raspberries, Birberries, Currans, and the Roots of your trees powdered with Strawberries, Red, White, and Green; what a pleasure is this! Your Gardener can frame your lesser wood to the shape of men armed in the field, ready to give battle; of swift-running Grey-hounds, or of well-scented and true-running Hounds.

Shape of men
and beasts.

Hounds to chase the Deer, or hunt the Hare. This kind of hunting shall not waste your Corn, nor much your Coyn.

Mazes well framed a man's height, may perhaps make your friend wander in gathering of Berries, till he cannot recover himself without your help.

To have occasion to exercise within your Orchard, it shall be a pleasure to have a bowling-Alley, or rather (which is more manly, and more healthful) a pair of Butts, to stretch your Arms.

Bowling-
Alley.
Butts.

Rosemary and sweet Eglantine are seemly Ornaments about a Door or Window, and so is Woodbine.

Look Chap. 15. and you shall see the form of a Conduit; if there were two or more, it were not amiss.

And in mine own opinion, I could highly commend your Orchard, if either through it, or hard by it, there should run a pleasant River with silver streams, you might fit in your Mount, and angle a peckled Trout, sleighty Eel, or some other dainty Fish. Or Moats, whereon you may row with a Boat, and fish with Nets.

Store of Bees in a warm and dry Bee-house, comely made of Fir-boards, to sing, and sit, and feed upon your flowers and sprouts, make a pleasant noise and sight. For cleanly and innocent Bees, of all other things, love, and become, and thrive in an Orchard. If they thrive, (as they must needs, if your Gardiner be skilful, and love them; for they love their friends, and hate none but their enemies) they will, besides the pleasure, yield great profit to pay him his wages; yea, the increase of twenty Stocks or Stools with other fees, will keep your Orchard.

You need not doubt their stings, for they hurt not whom they know, and they know their Keeper and acquaintance. If you like not to come among them, you need not doubt them; for but near their store, and in their own defence, they will not fight, and in that case only (and who can blame them?) they are manly, and fight desperately. Some (as that honourable Lady at *Hacknes*, whose name doth much grace mine Orchard) use to make seats for them in the stone-walls of their Orchard, or Garden, which is good, but wood is better.

A Vine overshadowing a seat, is very comely, though her Grapes with us ripen slowly.

One

Birds.
Nightingale.

On the first place that adorns an Orchard, I cannot let slip : a brood of Nightingals, who with several notes and tunes, with a strong delightful voice out of a weak body, will bear you company night and day. She loves (and lives in) hots of woods in her heart. She will help you to cleanse your trees of Caterpillars, and all noysome worms and flies. The gentle Robin-red-brest will help her, and in winter in the colden storms will keep a part. Neither will the silly Wren be behind in Summer, with her distinct whistle, (like a sweet Recorder) to cheer your spirits.

Robin-red-brest.
Wren.

Black-bird.
Thrush.

The Black-bird and Thrush (for I take it, the Thrush sings not, but devours) sing loudly in a May morning, and delights the ear much, and you need not want their company, if you have ripe Cherries or Berries, and would as gladly as the rest do your pleasure: but I had rather want their company than my fruit.

What shall I say? A thousand of pleasant delights are attending an Orchard: and sooner shall I be weary, than I can reckon the least part of that pleasure, which one that hath, and loves an Orchard, may find therein.

What is there of all these few that I have reckoned, which doth not pleasure the eye, the ear, the smell, and taste? And by the senses, as Organs, Pipes, and Windows, these delights are carried to refresh the gentle, generous, and noble mind.

Your own
labour.

To conclude, What joy may you have, that you living to such an age, shall see the blessing of God on your labours while you live, and leave behind you to heirs, or successors, (for God will make heirs) such a work, that many ages after your death shall record your love to their Country? And the rather, when you consider (Chap. 14.) to what length of time your work is to last.

F I N I S.

THE
COUNTRY HOUSE-WIFE'S
GARDEN:

CONTAINING

Rules for HERBS and SEEDS
of common Use, with their Times
and Seasons when to Set and
Sowe them.

TOGETHER

With the HUSBANDRY of BEES,

Published with Secrets very necessary for every
HOUSE-WIFE: As also divers new
Knots for GARDENS.

The Contents see at large in the last Page.

Genes. 2. 29.

*I have given unto you every Herb, and every Tree, that
shall be to you for meat.*

L O N D O N:

Printed for George Sambridge. 1676.

COUNTRY HOUSES

GARDEN

CONTAINING

Rules for the use of
of common life, with their Times
and Seasons when to sow and
Sow them.

TOGETHER

With the Husbandry of the

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THE
COUNTRY HOUSE-WIVES
GARDEN.

CHAP. I.

The Soyl.

THE Soyl of an Orchard and Garden differ only in these three points: First, the Gardens soil would be somewhat dryer, because herbs being more tender then trees, can neither abide moisture nor drought, in such excessive measure as trees; and therefore having a drier soyl, the remedy is easie against drought: if need be, water soundly, which may be done with small labour, the compass of a Garden being nothing so great as of an Orchard: and this is the cause (if they know it) that Gardners raise their squares; but if moisture trouble you, I see no remedy without a general danger, except in Hops, which delight much in a low and sappy earth.

Secondly, the soyl of a Garden would be plain and level, at least every square, (for we purpose the square to be the fittest form) the reason is, the herbs of a garden wanting such helps as should stay the water, which an orchard hath, & the roots of herbs

being mellow and loose, is soon either washt away, or sends out his heart by too much drenching and washing.

Thirdly, if a Garden soil be not clear of weeds, and namely of graft, the herbs shall never thrive; for how should good herbs prosper, when evil weeds wax so fast, considering good herbs are tender in respect of evil weeds: these being strengthened by nature, and the other by art? Gardens have small place in comparison, and therefore may more easily be followed, at the least one half year before, and the better dressed after it is framed. And you shall find that clean keeping doth not onely avoid danger of gathering weeds, but also is a special ornament, and leaves more plentifully sap for your tender herbs,

CHAP. II.

Of the Sites.

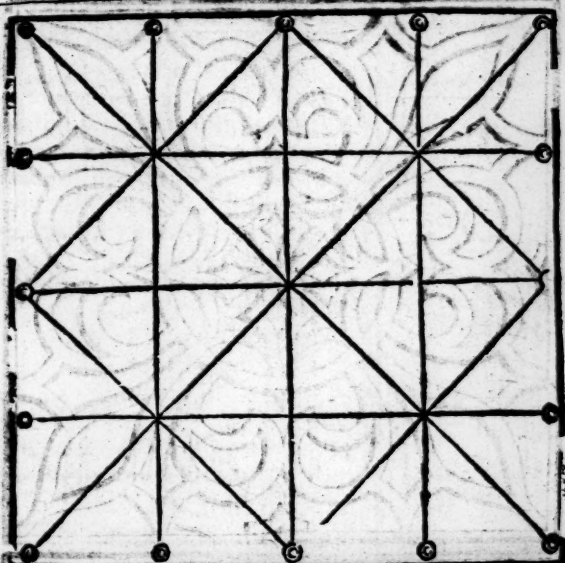
I Cannot see in any sort, how the site of the one should not be good and fit for the other: The ends of both being one, good, wholesome, and much fruit joynd with delight, unless trees be more able to abide the nipping frosts than tender herbs; but I am sure, the flowers of trees are as soon perished with cold, as any herb, except Pumpion and Melons.

CHAP. III.

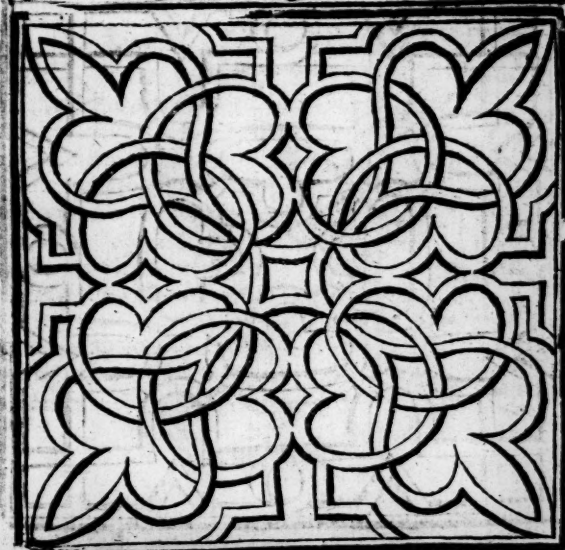
Of the Form.

Let that which is said in the Orchards form, suffice for a Garden in general: but for special forms in squares, they are as many, as there are devices in Gardiners brains. Neither is the wit and art of a skilful Gardiner in this point not to be commended, that can work more variety for breeding of more delightful choice, and of all those things, where the owner is able and desirous to be satisfied. The number of Forms, Mazes, and Knots is so great, and men are so diversly delighted, that I leave every House-wife to her self, especially seeing to set down many, had been but to fill much paper; yet lest I deprive her of all delight and direction, let her view these few, choice, new forms; and note this generally, that all plots are square, and all are bordered about with Privet, Raisins, Fea-berries, Roses, Thorn, Rosemary, Bee-flowers, Hyssop, Sage, or such like.

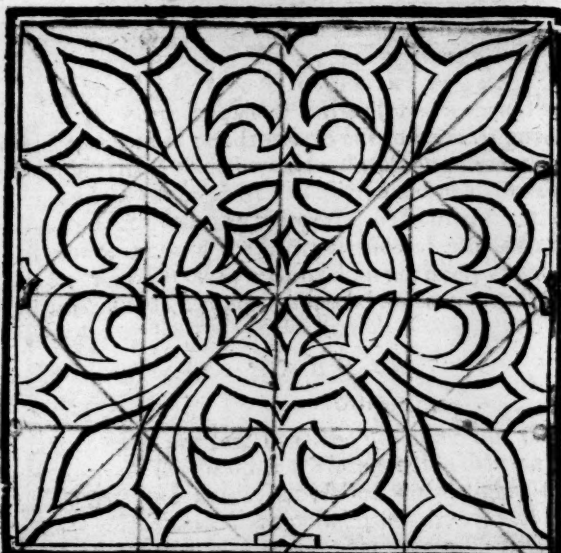
CHAP.



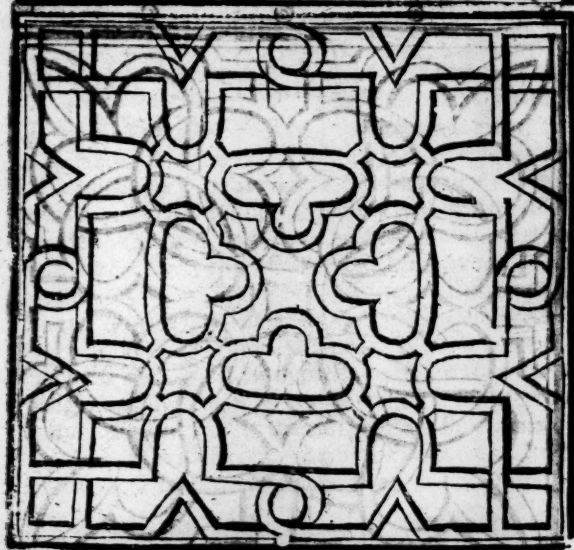
The ground
plot for knots.



Cinkfoill.

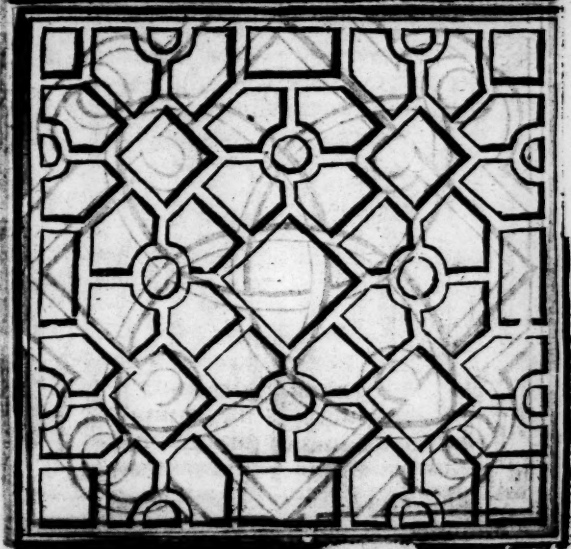
Flower-
de-luce.

The Tre-foy.



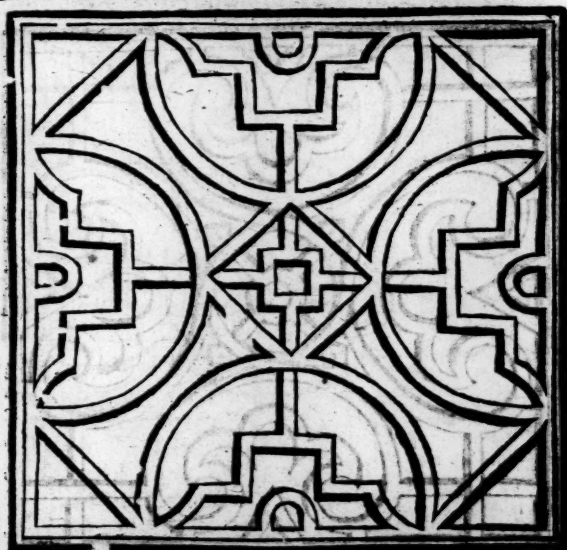


The fret.

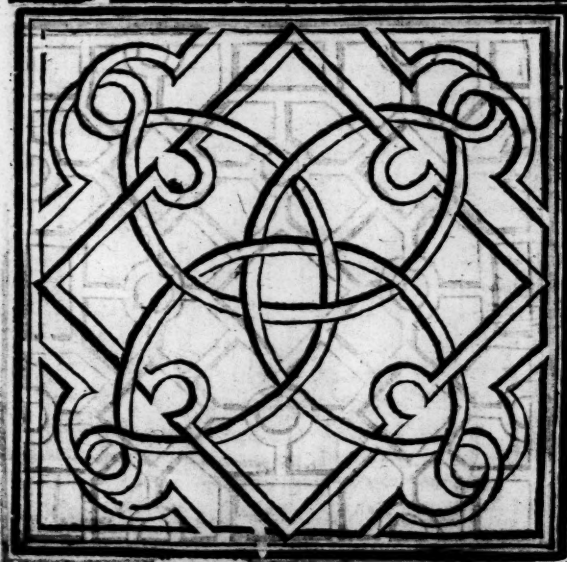


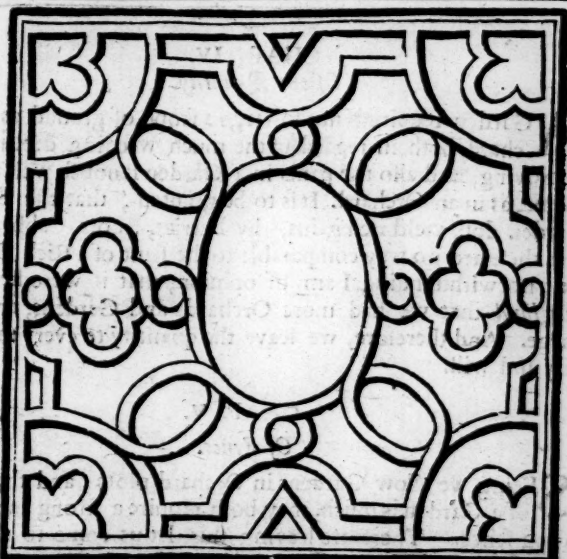
Lozenges.

Cross-bow.

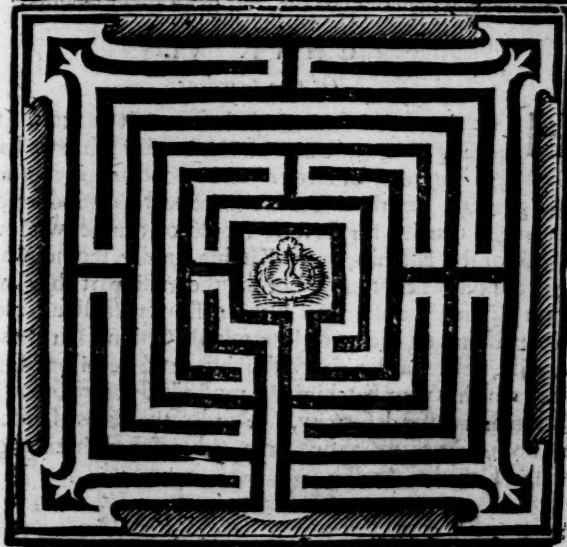


diamond.





Oval.



Maze.

CHAP. IV.

Of the Quantity.

A Garden requireth not so large a scope of ground as an Orchard, both in regard of the much weeding, dressing, and removing, and also the pains in a Garden is not so well repayed home, as in an Orchard. It is to be granted, that the Kitching garden doth yield rich gains, by Berries, Roots, Cabbages, &c. yet these are no way comparable to the fruit of a Rich Orchard: but notwithstanding I am of opinion, that it were better for England that we had more Orchards and Gardens, and more large. And therefore, we leave the quantity to every mans ability and will.

CHAP. V.

Of Fence.

Seeing we allow Gardens in Orchard plots, and the benefit of a Garden is much, they both require a strong and shrowding fence. Therefore leaving this, let us come to the Herbs themselves, which must be the fruit of all these labours.

C H A P. VI.

Of two Gardens.

Herbs are of two sorts, and therefore it is meet, (they requiring divers manners of Husbandry) that we have two Gardens; a garden for flowers, and a Kitchin-garden; or a Summer garden: not that we mean so perfect a distinction, that we mean the Garden for flowers should or can be without herbs good for the Kitchin, or the Kitchin-garden should want flowers, nor on the contrary; but for the most part they would be severed: first, because your Garden-flowers shall suffer some disgrace, if among them you intermingle Onions, Parsnips, &c. Secondly, your Garden that is durable, must be of one form: but that which is your Kitchens use, must yield daily Roots, or other herbs, and suffer deformity. Thirdly, the herbs of both will not be both alike ready, at one time, either for gathering, or removing. First therefore,

Of the Summer Garden.

THese herbs and flowers are comely and durable for squares & Cnots, and all to be set at *Michael-tide*, or somewhat before; that they may be settled in, and taken with the ground before winter, though they may be Set, especially sown, in the spring.

Roses of all sorts; (spoken of in the Orchard) must be Set. Some use to set slips and twine them, which sometimes, but seldom thrive all.

Rosemary, Lavender, Bee-flowers, Ilop, Sage, Time, Cowslips, Piony, Daiesies, Clove-Gillflowers, Plaks, Southern wood, Lillies, of all which hereafter.

Of the Kitchen Garden.

THough your Garden for flowers doth in a sort peculiarly challenge to it self a perfect, and exquisite form to the eyes, yet you may not altogether neglect this, where your herbs for the pot do grow: And therefore some here make comely borders with the herbs aforesaid; the rather, because abundance of Roses and Lavender, yield much profit, and comfort to the senses. Rose water, Lavender, the one cordial (as also the Violets, Barage, and Bugloss) the other reviving the spirits by the sense of smelling, both most durable for smell, both in flowers and water: you need not here raise your beds, as in the other Garden, because Summer towards, will not let too much wet annoy you, and these herbs require more moisture: yet must you have your beds divided, that you may go betwixt to weed, and somewhat of form would be expected: To which it availeth that you place your herbs of biggest growth, by walls, or in borders, as Fennel, &c. and the lowest in the middle, as Saffron, Strawberries, Onions, &c.

CHAP. VII.

Divisions of Herbs.

Garden herbs are innumerable, yet there are common, and sufficient for our Country-house-wives.

Herbs of great growth.

K

Fen-

Fennel, Angelica, Tanfie, Hollihock, Lovage, Elicampane, French Mallows, Lillies, French Poppy, Endive, Succory, and Clary.

Herbs of middle growth.

Burrage, Buglofs, Parsly, Sweet Sicily, Flower-de-luce, Stock-Gill, flowers, Wall-flowers, Anniseeds, Coriander, Feather-sew, Mary-golds, Oculus Christi, Langdibee, Alexanders, Carduus-Benedictus.

Herbs of smaller growth.

Panfie, or Hearts-ease, Coast-Marjoram, Savory, Straw-berries, Saffron, Licoras, Daffadownillies, Leeks, Chives, Chibbals, Skerots, Onions, Bachelors buttons, Daisies, Pennyroyal.

Hitherto, I have only reckoned up, and put in this rank, some Herbs: *My Husbandry* follows each in an Alphabetical order, the better to be found.

C. H. A. P. VIII.

Husbandry of Herbs.

Alexanders are to be renewed as Angelica. It is a kindly Pot-herb.

Angelica is renewed with the seed, whereof be beareth plenty the second year, and so dyeth. You may remove the roots the first year. The leaves distilled yield water, sovereign to expel pain from the stomack. The Root dried, taken in the fall, stoppeth the pores against infection.

Anniseeds make their growth, and bear seeds the first year, and dieth as Coriander: it is good for opening the pipes and is used in Comfits.

Artichokes are renewed by dividing the Roots into Sets, in March every third or fourth year. They require a several usage, and therefore a several whole plot by themselves, especially considering they are plentiful off fruit much desired.

Burrage, and Buglofs, two Cordials, renew themselves by seed yearly, which is hard to be gathered, they are exceeding good Pot-herbs, good for Bees, and most comfortable for the heart and stomack, as Quinces and Wardens.

Camomile, set roots in banks and walks, it is sweet smelling, quaffing head-ach.

Cabbages, require great room, they seed the second year, sow them in February, remove them when the plants are an handfull long, set deep and wet. Look well in drought for the white Caterpillars worm, the spawns under the leaf closely; for every living Creature doth seek food and quiet shelter, and growing quick they draw to, and eat the heart: you may find them in a rainy dewy morning.

It is a good Pot-herb, and of this herb called *Cole*, our Countrey House-wifes give their Pottage their name, and call them *Caell*.

Cardus Benedictus, or blessed Thistle, seeds and dies the first year: the excellent vertue thereof, I refer to Herbs, for we are Gardiners, not Physitians.

Carrets are sown late in April, or May, as Turneps; else they seed the first year, and then their roots are naught: the second year they die, their root grow great, and require large room.

Chibals or Chives, have their roots parted, as Garlick, Lillies; &c. and so are they set every third or fourth year: a good pot-herb, opening, but evil for the eyes.

Clary, is sown, it seeds the second year, and dies. It is somewhat harsh in taste; a little in pottage is good; it strengtheneth the reins.

Coast Root parted, makes Sets in March; it bears the second year; it is used in Ale in May.

Coriander, is for usage and uses, much like Anniseeds.

Daffadownlillies have their roots parted, and set once in three or four years, or longer time. They flower timely, and after Midsummer are scarcely seen. They are more for Ornament than for use, so are Daisies.

Daisie roots parted and Set, as Flower-deluce, and Camomile, when you see them grow too thick or decay. They be good to keep up, and strengthen the edges of your borders, as Pinks, they be red, white, mixt.

Elcampane-Root is long-lasting, as is the Lovage: it seeds yearly, you may divide the Root, and Set; the Root taken in winter is good: (being dried, powdered, and drunk) to killitches.

Endive and Succory, are much like in nature, shape, and use, yellow

they renew themselves by seed, as Fennel and other herbs. You may remove them before they put forth shanks: a good Pot-herb.

Fennel is renewed, either by the seeds (which it beareth the second year, and so yearly in great abundance) sown in the fall or Spring, or by dividing one Root into many Sets, as Artichoake. It is long of growth and life. You may remove the root unshankt: It is exceeding good for the eyes, distilled, or any otherwise taken: it is used in dressing Hives for swarms; a very good Pot-herb, or for Sallets.

✓ **Fether-sew shaks seed.** Good against a shaking Fever, taken in a posset drink fasting.

Flower-de-luce, long lasting, divide his roots and Set: the roots dried have a sweet smell.

✓ **Garlick** may be set at handfull distance, two inches deep, in the edge of your beds. Part the head into several cloves, and every clove set in the latter end of February: will increase to a great head before September: good for opening, evil for eyes, when the blade is long, fasten two and two together, the heads will be bigger.

✓ **Hollibock** riseth high, seedeth and dyeth, the chief use I know, is ornament.

✓ **Hop** is reasonable long lasting: young Roots are good Set, slips better. A good pot-herb.

July-flowers, commonly called **Gilly-flowers**, or **Clove-July-flowers**, (I call them so, because they flower in July) they have the name of Cloves, of their sent. I may well call them the King of flowers except the Rose, & the best sort of them are called **Queen-July-flowers**. I have of them nine or ten several colours, & divers of them as big as Rofts: of all flowers (save the Damask Rose) they are the most pleasant to sight and smell; they last not past three or four years unmoved. Take the slips (without shanks) and Set any time save in extreame frost, but especially at **Michael-side**. Their use is much in ornament, and comforting the spirits, by the sense of smelling.

✓ **July-flowers of the Wall**, or **Wall July-flowers**, **Wall-flowers**, or **Bee-flowers**, or **Winter-July-flowers**, because growing in the walls even in winter, and good for Bees, will grow even in stone-walls,

walls, they will seem dead in Summer, and yet revive in Winter they yield seed plentifully, which you may sow at any time, or in any broken earth, especially on the top of a mud-wall, but moist; you may set the root before it be brancht, every slip that is not flower'd will take root, or crop him in the Summer, and he will flower in Winter, but his Winter seed is untimely. This and Palmes are exceeding good, and timely for Bees.

Leeks yield seed the second year, unre-moved, and dye, unless you remove them, usually to eat with Salt and Bread, as Onions always green, good pot-herb, evil for the eyes.

Lavender-spike would be removed within seven years, or eight at the most: slips twined, as Hyssop and Sage, would take best at *Michael-tide*. This flower is good for Bees, most comfortable for swelling, except Roses: and kept dry, is as strong after a year, as when it is gathered. The water of this is comfortable.

White *Lavender* would be removed sooner.

Lettice yields seed the first year, and dyes: some betime, and if you would have them Cabbage for Sallets, remove them as you do Cabbage. They are usual in Sallets and in the pot.

Lillies white and red, remove once in three or four years, their roots yield many Sets, like the Garlick. *Michael-tide* is the best. They grow high, after they get root. These roots are good to break a boil, as are Mallows and Sorrel.

Mallows, French or gagged, the first or second year, seed plentifully. Sow in *March*, or before. They are good for the housewives pot, or to break a bunch.

Marigolds, most commonly come of seed, you may remove the Plants when they are two inches long. The double Marigold, being as big as a little Rose, is good for shew. They are a good Pot-herb.

Oculus Christi, or Christs-eye, seeds, and dyes the first or second year: you may remove the young Plants, but seed is better. One of these seeds put into the eye, within three or four hours will gather a thick skin, clear the eye, and bolt it self forth without hurt to the eye. A good Pot-herb.

Onions are sown in *February*, they are gathered at *Michael-tide*, and all the Summer long, for Sallet, as also young Parsly, Sage,

Sage, Chibals, Lettice, sweet Sicily, Fennel, &c. good alone, or with meat, muttons, &c. for sawce, especially for the pot.

Parfly sowe the first year, and use the next year: it seeds plentifully, an herb of much use, as sweet Sicily is. The Seed and Roots are good against the stone.

Parfnips require an whole plot, they be plentiful and common, sowe them in *February*, the King's (that is in the middle) seed broadest and reddest. *Parfnips* are sustenance for a strong stomach, not good for evil eyes: When they cover the earth, in a drought to tread the tops, makes the Roots bigger.

Penny-royal, or pudding-grass, creeps along the ground, like ground Ivy. It lasts long, like daisies, because it puts and spreads daily new roots. Divide, and remove the roots, it hath a pleasant taste & smell, good for the pot, or hackmeat, or a Haggas pudding.

Pumpions, set Seeds with your finger, a finger deep, late in *March*, and so soon as they appear, every night if you doubt frost, cover them, and water them continually out of a water-pot: they be very tender, their fruit is great and waterish.

French-Poppy beareth a great flower, and the seed will make you sleep.

Raddish is sawce for cloyed stomachs, as Capers, Olives, and Cucumbers, cast their seeds all summer long here and there, and you shall have them always young and fresh.

Rosemary, the Grace of Herbs here in *England*, in other Countries common. To set slips immediately after *Lammas*, is the surest way. Seed sown may prove well, so they be sown in hot weather, somewhat moist, and good earth: for the herb, though great, is neth and tender (as I take it) brought from hot Countries to us in the cold North: set thin, it becomes a window well. The use is much in meats, more in Physick, most for Bees.

Rue, or Herb of Grace, continually green, the slips are set. It lasts long, as *Rosemary*, *Sothernwood*, &c. too strong for mine House-wifes pot, unless she will brew Ale therewith, against the Plague: let them not seed if you will have him last.

Saffron every third year his roots would be removed at *Midsummer*, for when all other Herbs grow most, it digth, till it flowereth at *Michael-side*, and groweth all Winter: keeps his flowers from Birds in the morning, and gather the yellow, (for they

they shape much like Lillies) dry, and after dry them, they be precious, expelling diseases from the heart and stomach.

Savory, seeds and dyes the first year, good for my Housewives pot and pye.

Sage, set slips in May, and they grow aye; let it not seed, it will last the longer. The use is much and common. The Monkish Proverb is *trium*.

Cur moritur homo, cur salsvia crescit in hortu.

Skerrots, the Roots are set when they be parted, as *Piony*, and Flower-de-luce at *Michael-tide*, the Root is but small and very sweet, I know none other special use but the Table.

Sweet Sicily, long lasting, pleasantly tasting, either the seed sown, or the root parted, or removed, makes increase, it is of like use with Parsley.

Strawberries, long lasting, set Roots at *Michael-tide*, or the Spring, they be red, white and green, and ripe, when they be great and soft, some by *Midsummer with us*. The use is, they will cool my Housewife well, if they be put in Wine or Cream with Sugar.

Time, both seeds, slips, and Roots are good, if it seed not, it will last three or four years or more, it smelleth comfortably. It hath much use, namely, in all cold meats, it is good for Bees.

Turnip, is sown: In the second year they bear plenty of seed; they require the same time of sowing that Carrets do; they are sick of the same disease that Cabbages be. The root increaseth much, it is most wholesome, if it be sown in a good and well tempered earth; Sovereign for eyes and bees.

I reckon these herbs onely, because I teach my Country Housewife, not skilful Artists; and it should be an endless labour, and would make the matter tedious to reckon up *Land-chief*, *Stock-Gilly-flowers*, *Charrel*, *Valerian*, *Go to bed at noon*, *Piony*, *Licorin*, *Tansie*, *Garden-Mints*, *Germander*, *Centaury*, and a thousand such Physick Herbs. Let her first grow cunning in this, and then she may enlarge her Garden as her skill and ability increaseth. And to help her the more, I have set down these Observations.

CHAP. IX.

General Rules in Gardening.

IN the South parts, Gardening may be more timely, and more safely done, then with us in *Yorkshire*, because our air is not so favourable, nor our ground so good.

2. Secondly, most seeds shake, by turning the good earth, are renewed, their Mother the earth keeping them in her bowels, till the Sun their Father can reach them with his heat.

3. In setting herbs, leave no top more then a handful above the ground, nor more then a foot under the earth.

4. Twine the roots of those slips you set, if they will abide it. Gilly-flowers are too tender.

5. Set moist, and sow dry.

6. Set slips without thanks at any time, except at *Midsummer*, and in frosts.

7. Seeding spoils the most roots, as drawing the heart and sap from the root.

8. Gather for the pot and medicines, herbs tender and green, the sap being in the top, but in Winter the root is best.

9. All the herbs in the Garden for flowers would once in seven years be renewed, or soundly watered with puddle water, except *Rosemary*.

10. In all your Gardens and Orchards, Banks and Seats of Camomile, Penny-royal, Daisies and Violets, are seemly and comfortable.

These require whole plots, Artichoaks, Cabbages, Turnips, Parsnips, Onions, Carrets, and (if you will) Saffron and Skerrets.

12. Gather all your seeds, dead, ripe, and dry.

13. Lay not dung to the roots of your herbs, as usually they do: for dung not melted is too hot even for Trees.

14. Thin setting and sowing (so the roots stand not past a foot distance) is profitable, for the herbs will like the better. Greater herbs would have more distance.

15. Set and sow herbs in their time of growth, (except at *Midsummer*,

summer, for then they are too tender) but Trees in their time to rest.

16. A good House-wife may, and will gather store of herbs for the pot, about Lammas, and dry them, and pound them; and in winter they will do good service.

Thus have I limmed out a Garden to our Country House-wives, and given them Rules for common herbs. If any of them (as sometimes they are) be knotty, I refer them to Chap. 3. The skill and pains of weeding the Garden with weeding knives of fingers, I refer to themselves, and their maids, willing them to take the opportunity of a shower of rain; withal, I advise the Mistress either to be present her self, or to teach her maids to know herbs from weeds.

CHAP. X.

The Husbandry of Bees.

Here remaineth one necessary thing to be prescribed, which in mine opinion makes as much for ornament, as either flowers, or form, -or cleanness, and I am sure as commodious as any of, or all the rest: which is Bees, well ordered. And I will not account her any of my good House-wives, that wanteth either Bees, or skilfulness about them. And though I know some have written well, and truly, and others more plentifully upon this Theme; yet somewhat have I learned by experience, (being a Bee-master my self) which hitherto I cannot find put into writing, for which I think our House-wives will count themselves beholding unto me.

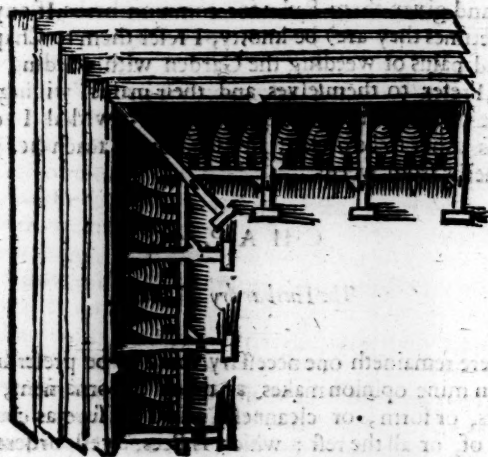
The first thing that a Gardiner about Bees must be careful for, is, an house, not stakes and stones abroad, *Sub dio* for stakes rot and reel, Rain and weather eat your hives and covers, and cold most of all is hurtful for your Bees. Therefore you must have an house made along a sure dry wall in your Garden, near or in your Orchard: For Bees love flowers and wood with their hearts.

Bee-houses.

This

This the form; a Frame standing on posts with one floor (if you would have it hold more Hives, two floors) boarded, laid on bearers, and back posts, covered over with boards, flat-wise.

Let the floors be without holes or clefts, left in casting time



the Bees lie out and loyter. And though your Hives stand within an hand-breadth the one of another, yet will the Bees know their home.

In this Frame may your Bees stand dry and warm, especially if you make doors, like doors of windows, to throwd them in winter, as an house: provided you leave the hives mouth open. I my self have devised such an house, and I find that it strengthens my Bees much, and my Hives will last six to one.

Mr. Markham commends Hives of Wood: I discommmend them not; but straw hives are in use with us, and I think, with all the World, which I commend for nimbleness, closeness, warmth, and driness. Bees love no external motions of daubing, or such like. Sometimes occasion shall be offered to lift and turn hives, as shall appear hereafter. One light entire
hive

hive of straw, in that case, is better than one that is daubed, weighty, and cumbersome: I wish every hive, for a keeping swarm, to hold three pecks at least by measure; for too little hives procure Bees, in casting time, either to lie out, and loyter, or else to cast before they be ripe, and strong, and so make weak swarms, and untimely: whereas if they have room sufficient they ripen timely, and casting seasonably, are strong, and fit for labour presently. Neither would the hive be too great, for then they loyter, and waste meat and time.

Your Bees delight in wood, for feeding, especially for casting, Hiving of Bees. therefore want not an Orchard. A May's swarm is worth a

Mar's Foal: if they want wood, they be in danger of flying away. Any time before *Midsummer* is good for casting, and timely; before *July* is not evil. I much like Mr. *Markham's* opinion, for having a swarm in combs of a dead or forsaken hive, so they be fresh and cleanly. To think, that a swarm of your own, or others, will of it self come into any such hive, is a meer conceit, *Experto crede Roberto*. His sinearing with hony is to no purpose, for the other Bees will eat it up. If your swarm knit in the top of a tree, as they will, if the wind beat them not to fall down, let the stool or ladder prescribed in the Orchard do you service.

The less the Spelks are, the less is the waste of your honey, Spelks. and the more easily will they draw, when you take your Bees. Four Spelks athwart, and one top Spelk are sufficient. The Bees will fasten their combs to the hive. A little honey is good, but if you want, Fennel will serve to rub your hive withal. The Hive being drest, and ready spelkt, rub'd, and the hole made for their passage; (I use no hole in the Hive, but a piece of wood hoal'd, to save the Hive, and keep out mice.) shake in your Bees, or the most of them (for all commonly you cannot get) the remainder will follow. Many use smock, nettles, &c. which I utterly dislike; for Bees love not to be molested. Ringing in the time of casting is a meer fancie: violent handling of them is simply evil, because Bees of all other creatures love cleanliness, and peace. Therefore handle them leisurely, and quietly, and their Keeper, whom they know, may do with them what he will without hurt: Being lived at night, bring them to their seat. Set your Hives all of one year together.

Signes of breeding, if they be strong.

1. They will avoid dead young Bees and Drones.
2. They will sweat in the morning, till it run from them, always when they be strong.

Signes of casting.

1. They will fly Droins by reason of heat.
2. The young Swarms will once or twice in some fair season come forth mustring, as though they would cast, to prove themselves, and go in again.
3. The night before they cast, if you lay your ear to the hives mouth, you shall hear two or three, but especially one above the rest, cry, up, up, up, or Tout, tout, tout, like a Trumpet sounding the alarum to the battel.

Much descanting there is of, and about the Master Bee, and their degrees, order, and Government: but the truth in this point is rather imagined, than demonstrated. There are some conjectures of it, *viz.* we see in the combs divers greater houses than the rest, and we commonly hear the night before they cast, sometime one Bee, sometime two or more Bees, give a loud and several sound from the rest, and sometimes Bees of greater bodies than the common sort: But what of all this? I lean not on conjectures, but love to set down what I know to be true, and leave these things to them that love to divine.

Keep none weak, for it is hazard oftentimes with loss. Feeding will not help them: for being weak, they cannot come down to meat, if they come down, they die, because weak Bees cannot abide cold. If none of these, yet will the other Bees, being strong, smell the honey, and come, and spoil, and kill them. Some helps is in casting time, to put two weak swarms together, or as Mr. Markham well saith, Let them not cast late, by raising them with wood, or stone, but with imps (say I.) An imp is, three or four wreaths wrought as the Hive, the same compass to raise the Hive withal; but by experience in trial, I have found out a better way by Clustering, for late or weak swarms; hitherto not found out of any that I know. That is this: After casting time, if I have any stock proud, and hindered from timely casting, with former Winters poverty, or evil weather in casting time, with two handles and crooks fitted for the purpose, I turn up that stock so peffer-

ed

Catching.

Clustering.

ed with Bees, and set it on the crown, upon which so turned with the mouth upward, I place another empty hive well drest, and spelkt, into which, without any labour, the swarm that would not depart, and cast, will presently ascend, because the old Bees have this quality (as all other breeding creatures have) to expel the young, when they have brought them up.

There will the Swarm build as kindly, as if they had of themselves been cast. But be sure you lay betwixt the Hives some straight and cleanly stick, or sticks, or rather a board with holes, to keep them asunder: otherwise they will joyn their works together so fast, that they cannot be parted. If you so keep them asunder at *Michael-tide*, if you like the weight of your swarm (for the goodness of swarms is tried by the weight) so caught, you may set it by for a stock to keep. Take heed in any case the combs be not broken, for then the other Bees will smell the honey, and spoil them. This have I tried to be very profitable for the saving of Bees.

The Instrument hath this form. The great strait piece of wood



the rest are iron clasps & nails, the clasps are loose in the staple, two men with two of these fastned to the Hive, will easily turn it up.

They gather not till *July*; for then they be discharged of their young, or else they are become now strong to labour; & now sap in flowers is strong and proud, by reason of time, & force of Sun. And now also in the North (and not before) the herbs of greatest vigour put forth their flowers; as Beans, Fennel, Burrage, &c.

The most sensible weather for them, is heat and draught, because the nest Bee can neither abide cold nor wet; and showers (which they well fore-see) do interrupt their labours, unless they fall in the night, and so they further them.

After casting time, you shall benefit your stocks much, if you help them to kill their Droans, which by all probability and judgment, are an idle kind of Bees, and wastful. Some say they breed, and have seen young Droans in taking their honey, which I know is true. But I am of opinion, that there are also Bees which

which have lost their stings, and so being as it were gelded, become idle and great : there is great use of them. *Dem. & Nasura nihil fecit frustra.* " They hate the Bees, and cause them cast the " sooner ; they never come forth, but when they be over-heated ; " they never come home laden. After casting-time, and when the Bees want meat, " You shall see the labouring Bees fasten on them, " two, three, or four at once, as if they were thieves to be led to " the Gallows, and killing them, they call them out, and draw " them far from home, as hateful enemies. Our House-wife, if she be the keeper of her own Bees (as she had need to be) may with her bare hand in the heat of the day safely destroy them in the hives mouth. Some use towards night, in a hot day, to set before the mouth of the hive a thin board with little holes in it, at which the lesser Bees may enter, but not the Droans ; so that you may kill them at your pleasure.

Annayances.

Snails spoil them by night like thieves ; they come so quietly, and are so fast, that the Bees fear them not ; look early and late, especially in a rainy or dewy evening or morning.

Mice are no less hurtful, and the rather to Hives of straw : and therefore coverings of straw draw them : they will in, either at the mouth, or shear themselves an hole : The remedy is good Cats, Rats-bane, and watching.

The cleanly Bee hateth the smoke as poyson ; therefore let your Bees stand nearer your Garden, than your Brew-house or Kitchen. They say Sparrows and Swallows are enemies to Bees, but I see it not.

More Hives perish by Winters cold, than by all other hurts ; for the Bee is tender and nice, and only lives in warm weather, and dies in cold ; And therefore, let my House-wife be perswaded, that a warm dry house before described, is the chiefest help she can make her Bees against this, and many more mischiefs. Many use against cold in Winter, to stop up their hive close ; and some set them in houses, perswading themselves, that thereby they relieve their Bees. First, tossing, moving, is hurtful. Secondly, in houses, going, knocking, and shaking is noisome. Thirdly too much heat in an house is unnatural for them. But lastly, and especially, Bees cannot abide to be stopp'd up close for at every warm season of the Sun they revive, and living eat, and eating must needs purge

purge abroad : in her house the cleanly Bee will not purge her self. Judge you what it is for any living creature, not to disburthen nature. Being shut up in calm seasons, lay your ear to the Hive, and you shall hear them yearn and yell, as so many hundred prisoners. Therefore impound not your Bee, so profitable and free a Creature.

Let none stand above three years, else the combs will be black and knotty, your honey will be thin and uncleanly ; and if any cast after three years, it is such as have swarms of old Bees, kept all together, which is great loss. Smoking with Rags, Rozen, or Brimstone, many use ; some use drowning in a tub of clean water, and the water well brew'd will be good botcher. Draw out your spels immediately with a pair of pinchers, lest the Wood grow soft and swell, and so will not be drawn, then must you cut your hive.

Let no fire come near your Honey, for fire softneth the wax and dross, and makes them run with the honey : Fire softneth, weakneth, and hindreth honey from purging. Break your combs small, when the dead empty combs are parted from the laden combs into a sieve, born over a great bowl, or vessel with two staves, and so let it run two or three days: the sooner you run it up, the better will it purge. Run your swarm honey by it self, and that shall be your best. The elder your Hives are, the worse is your honey.

Usual Vessels are of Clay, but after wood be satiated with Honey (for it will leak at first : for honey is marvellously searching, though thick, and therefore virtuous) I use it rather, because it will not break so soon with falls, frosts, or otherwise, and greater Vessels of clay will hardly last.

When you use your Honey, with a spoon take off the skin, which it hath put up.

And it is worth the regard, that Bees thus used, if you have but forty stocks, shall yield you more commodity clearly than forty Acres of Ground.

And thus much may suffice, to make good Housewives love, and have good Gardens and Bees.



The Contents of the Country House-wifes Garden.

Chap. 1. T he Soyl.	p. 69.	Bee-house.	ibid.
Chap. 2. S ite.	p. 70.	Hives.	p. 86.
Chap. 3. F orm.	ibid.	Hiving of Bees.	p. 87.
Chap. 4. Q uantity.	79.	Spelks.	ibid.
Chap. 5. F ences.	ibid.	Catching.	p. 88.
Chap. 6. T wo Gardens.	ibid.	Clustering.	ibid.
Chap. 7. D ivision of Herbs.	79.	Droans.	p. 89.
Chap. 8. T he Husbandry of Herbs.	ibid.	Annoyances.	p. 90.
Chap. 9. G eneral Rules.	84.	Taking of Bees.	p. 91.
Chap. 10. T he Husbandry of Bees.	p. 85.	Straining Honey.	ibid.
		Vessels.	ibid.

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And have good Gardens and Bees

And thus much may suffice to make good Housewives Joy

Adieu

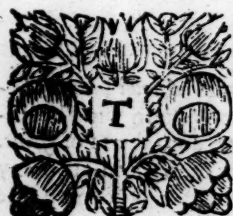


A most profitable
NEW TREATISE,
 from approved Experience, of the ART of
PROPAGATING PLANTS.

By *SIMON HARWARD.*

CHAP. I.

The Art of Propagating Plants.



Here are four sorts of Planting or Propagating, as in laying of shoots or little branches, while they are yet tender, in some pit made at their foot, as shall be said hereafter, or upon a little ladder or basket of earth, tied to the bottom of the branch, or in boaring a Willow through, and putting the Branch of the Tree into the hole, as shall be fully declared in the Chapter of Grafting.

There are likewise Seasons to Propagate in, but the best is in
 M the

- the Spring, and *March*, when the Trees are in the flower, and do begin to grow lusty. The young planted Cyens or little grafts must be propagated in the beginning of Winter, a foot deep in the earth, and good manure mingled amongst the earth, which you shall cast forth of the pit wherein you mean to propagate it, to tumble it in upon it again. In like manner, your superfluous Cyens, or little Plants must be cut close by the earth, when as they grow about some small Imp, which we mean to propagate, for they will do nothing but rot: For to propagate, you must dig the earth round about the tree, that so your roots may be laid in a manner halfe bare. Afterwards draw into length the pit an that side where you mean to propagate, and according as you perceive that the roots will be best able to yield, and be governed in the same pit, to use them, and that withall gentleness, and stop close your C. eus, in such sort, as that the wreath which is in the place where it is grafted, may be a little lower than the Cyens of the new wood growing out of the earth, even so high as it possible may be. If the Trees that you would propagate be somewhat thick, and thereby the harder to ply, and somewhat stiff to lay in the pit, then you may wet the stock almost to the midst, betwixt the root and the wreathing place, so with gentle handling of it, bow down into the pit the wood which the grafts have put forth, and that in as round a compass as you can, keeping you from breaking of it; afterward lay over the cut with gummed wax, or with gravel and sand.
- 2.

C H A P. I I.

Grafting in the Bark.

Grafting in the Bark, is used from mid *August*, to the beginning of Winter, and also when the Western wind beginneth to blow, being from the 7 of *February*, unto the 11 of *June*. But there must be had care, not to graff in the bark in any rainy season, because it would wash away the matter of joyning the one and the other together, and so hinder it.

Grafting in the bud is used in Summer-time, from the end of *May* until *August*, as being the time when the Trees are strong and lust, and full of sap and leaves. To wit, in a hot Country,

Country, from the midst of *June* unto the midst of *July*, but in cold Countries to the midst of *August*, after some small showers of Rain.

If the Summer be so exceeding dry, as that some Trees do withhold their sap, you wait the time till it do return.

Graft from the full of the Moon, until the end of the old.

You may graft in a cleft, without having regard to Rain, for the sap will keep it off.

You may graft from mid *August*, to the beginning of *November* : Cows dung with straw doth mightily preserve the graft.

It is better to graft in the evening than in the morning.

The furniture and tools of a Grafter, are a basket to lay his Grafts in, Clay, Gravel, Sand, or strong Earth to draw over the Plants cloven, Moss, Woollen cloaths, Barks of Willow to joyn to the late things and earth before spoken, and to keep them fast : Oziers to tie again upon the bark, to keep them firm and fast, gummed Wax to dress and cover the ends and tops of the grafts newly cut, that so the rain and cold may not hurt them, neither yet the sap rising from below, be constrained to return again unto the shoots. A little Saw or hand-saw, to saw off the stock of the Plants ; a little Knife or Pen-knife to graft, and to cut and sharpen the grafts, that so the bark may not peel nor be broken ; which often cometh to pass when the graft is full of sap. You shall cut the graft so long, as that it may fill the cliff of the Plant, and therewithal it must be left thicker on the bark-side, that so it may fill up both the cliff and other incisions, as any need is to be made, which must be always new ground, well burnished without all rust. Two wedges, the one broad for thick Trees, the other narrow for less and tender Trees, both of them of Box, or some other hard and smooth wood, or steel, or of very hard iron, so they may need less labour in making them sharp.

A little hand-bill to set the Plants at more liberty, by cutting off superfluous boughs, helved of Ivory, Box, or Brasil.

C H A P. III.

Grafting in the Cleft.

THe manner of Grafting in a Cleft, to wit, the stock being cloven, is proper not only to trees, which are as great as a man's legs or arms, but also to greater. It is true, that being trees cannot easily be cloven in their stock, that therefore it is expedient to make incision in some one of their branches, and not in the main body, as we see to be practised in great Apple-trees, and great Pear-trees, and as we have already declared heretofore.

To graft in the cleft, you must make choice of a graft that is full of sap and juyce, but it must not be but till from after *January* until *March*: And you must not thus graft in any tree that is already budded, because a great part of the juyce and sap would be already mounted up on high, and risen to the top, and there dispersed and scattered hither and thither, into every sprig and twig, and use nothing welcome to the graft.

You must likewise be resolved not to gather your graft the day you graft in, but ten or twelve days before; for otherwise, if you graft it new gathered, it will not be able easily to incorporate it self with the body, and stock, where it shall be grafted, because that some part of it will dry, and by this means will be a hindrance in the stock, to the rising up of the sap, which it should communicate unto the graft, for the making of it to put forth; and whereas the dried part will fall a crumbling, and breaking through his rottenness, it will cause to remain a concavity, or hollow place in the stock, which will be an occasion of a like inconveniencie to befall the graft. Moreover, the graft being new and tender, might easily be hurt of the bands, which are of necessity to be tied about the stock, to keep the graft firm and fast. And you must further see, that your plant was not of late removed, but that it have already fully taken root.

7. When you are minded to graft many grafts into one Cleft, you must see that they be cut in the end all alike.

See that the grafts be of one length, or not much differing, and it is enough, that they have three or four eylets without the Wrench when the Plant is once sawed, and lopped of all his bran-

branches, if it have many: then you must leave but two at the most before you come to the cleaving of it; then put to your little Saw, or your Knife, or other edged tool that is very sharp; cleave it quite through the middest in gentle and soft sort: First, tying the stock very sure, that so it may not cleave further than is need; and then put to your wedges into the cleft until such time as you have set in your grafts, and in cleaving of it, hold the Knife with the one hand, and the tree with the other, to help keep it from cleaving too far. Afterwards put in your wedge of Box, or Brasil, or Bone, at the small end, so that you may the better take it out again when you have set in your grafts.

If the stock be cloven, or the bark loosed too much from the wood, then cleave it down lower, and set your grafts in, and look that your Incision be fit, and very justly answerable to the cleft, and that the two saps, first, of the plant and graft, be right and even set one against the other, and so handsomly fitted, as that there may not be the least appearance of any cut or cleft. For if they do not thus jump one with another, they will never take one with another, because they cannot work their seeming matter, and as it were cartilaginous glue in convenient sort or manner to the giving of their joynts together. You must likewise beware not to make your cleft overthwart the pitch, but somewhat aside.

The bark of your plant being thicker than that of your graft, you must set the graft so much the more outwardly in the cleft, that so the two saps may in any case be joyned, and set right the one with the other, but the rind of the Plant must be somewhat more out than that of the grafts or cloven side.

To the end that you may not fail of this work of imping; you must principally take heed, not to over-cleave the stocks of your trees. But before you widen the cleft with your wedges, bind and go about the stock with two or three turns, and that with an Ozier, close drawn together, underneath the same place, where you would have your cleft to end, that so your stock cleave not too far, which is a very usual cause of the miscarrying of grafts, inasmuch as hereby the cleft standeth so wide and open, as that it cannot be shut, and so not grow together again: but in the mean time spend it self, and breaketh out all his life in that.

that place which is the cause that the stock and the graft are both split. And this falleth out most often in Plum-trees, and branches of Trees. You must be careful to joyn the rinds of your grafts and plants, that nothing may continue open, to the end that the Wind, moisture of the Clay or Rain running upon the grafted place, do not get in: when the plant cleaveth very streight, there is not any danger nor danger in sloping down the graft. If
 10. you leave it somewhat uneven or rough in some places, or that the saps both of the one and the other may the better grow, and be glewed together, when you grafts are once well joyned to our Plants, draw out your wedges very softly, lest you displace them again: you may leave therewith in the cleft some small end of a wedge of green wood, cutting it very close with the head of the Stock: Some cast glue into the cleft, some sugar, and some gummed Wax.

11. If the Stock of the Plant, whereupon you intend to graft, be not so thick as your graft, you shall graft it after the fashion of a Goats-foot, make a cleft in the stock of the plant, not direct, but byas, and that smooth and even, not rough; then apply and make fast thereto the graft with all his bark on, and answering to the bark of the Plant. This being done, cover the place with the fat earth and Moss of the Woods tied together with a strong band: stick a pole of Wood by it to keep it stedfast.

C H A P. IV.

Grafting like a Scutcheon.

IN grafting after the manner of a Scutcheon, you shall not vary not differ much from that of the Flute or Pipe, save only that the Scutcheon-like graft having one eyelet, as the other hath, yet the wood of the tree whereupon the Scutcheon-like graft is grafted hath not any knob, or bud, as the wood whereupon the graft is grafted after the manner of a pipe.

12. In Summer, when the Trees are well replenished with sap, and that their new Cyens begin to grow somewhat hard, you shall take a shoot at the end of the chief branches of some noble and reclaimed trees, whereof you would fain have some fruit, and not many of his old store or wood, and from thence raise a good eyelet, the tail and all thereof to make your grafts. But when you chuse, take the thickest, and grossest, divide the tail in
 the

the midst before you do any thing else, casting away the leaf (if it be not a Pear-plum-tree, for that would have two or three leaves) without removing any more of the said tail; afterward with the point of a sharp knife, cut of the Bark of the said shoot, the pattern of a shield, of the length of a nail.

In which there is only one eylet higher than the midst, together with the residue of the tail which you left behind; and for the lifting of the said graft in Scutcheon, after that you have cut the bark of the shoot round about, without cutting of the wood within, you must take it gently with your thumb, and in putting it away, you must press upon the wood from which you pull it, that so you may bring the bud and all away together with the Scutcheon; for if you leave it behind with the wood, then were the Scutcheon nothing worth. You shall find out if the Scutcheon be nothing worth, if looking within when it is pulled away from the wood of the same suit, you find it to have a hole within, but more manifestly, if the bud do stay behind in the wood, which ought to have been in the Scutcheon. 13.

Thus your Scutcheon being well raised and taken off, hold it a little by the tail betwixt your lips, without wetting of it, even until you have cut the bark of the tree where you would graft it, and look that it be cut without any wounding of the wood within, after the manner of a crutch, but somewhat longer than the Scutcheon that you have to set in it, and in no place cutting the wood within; after you have made incision, you must open it, and make it gape wide on both sides, but in all manner of gentle handling, and that with a little Sizars of bone, and separating the wood and the bark a little within, even so much as your Scutcheon is in length and breadth: you must take heed that in doing hereof, you do not hurt the bark. 14.

This done, take your Scutcheon by the end, and your tail which you have left remaining, and put into your incision made in your tree, lifting up softly your two sides of the incision with your said Sizars of bone, and cause the said Scutcheon to joyn, and lie as close as may be, with the wood of the tree, being cut as aforesaid, in waying a little upon the end of your rind so cut; and let the upper part of your Scutcheon lie close unto the upper-end of your incision, or bark of your said tree: afterwards bind 15.

bind your Scutcheon about with a band of Hemp, as thick as a pen of a quill, more or less, according as your Tree is small or great, taking the same Hemp in the midst, to the end that either part of it may perform a like service; and wreathing and binding of the said Scutcheon into the incision of a tree, and it must not be tied too freight, for that will keep it from taking, the joyning of the one sap with the other being hindered thereby, and neither the Scutcheon nor yet the Hemp must be moist or wet; and the more justly to bind them together, begin at the back-side of the tree, right over against the midst of the incision, and from thence come forward to joyn them before, above the eylet and tail of the Scutcheon, crossing your band of Hemp so oft as the two ends meet, and from thence returning back again, come about and tie it likewise underneath the eylets, and thus cast about your hand still backward and forward until the whole cleft of the incision be covered above and below with the said Hemp, the eylet only excepted, and his tail, which must not be covered at all; his tail will fall away one part after another, and that shortly after the ingrafting, if so be the Scutcheon will take. Leave your Trees and Scutcheons thus bound for the space of one month, and the thicker, a great deal longer time. Afterward look them over, and if you perceive them to grow together, untie them, or at leastwise cut the Hemp behind them, and leave them uncovered. Cut also your branch two or three fingers above that, that so the imp may prosper the better; and thus let them remain till after winter, about the month of *March* and *April*.

18. If you perceive that the bud of your Scutcheon do swell and come forward, then cut off the tree three fingers or thereabouts, above the Scutcheon; for if it be cut off too near the Scutcheon, at such time as it putteth forth his first blossom, it would be a means greatly to hinder the flowing of it, and cause also that it should not thrive and prosper well; after that one year is past, and that the shoot beginneth to be strong, beginning to put forth the second bud and blossom, you must go forward to cut off in byas-wise the three fingers in the top of the tree which you left there, when you cut it the year going before, as hath been said.

When

When your shoot shall have put forth a great deal of length, you may stick down there, even hard joyned thereunto, little stakes, tying them together very gently and easily ; and these shall stay your shoots and prop them up, letting the wind from doing any harm unto them. Thus you may graft white Roses in red, and red in white. Thus you may graft two or three Scutcheons, provided that they be all of one side ; for they will not be set equally together in height, because then they would be all starvelings ; neither should they be directly one over another ; for the lower would stay the rising up of the sap of the Tree, and so those above should consume in penury, and undergo the aforesaid inconvenience. You must note, that the Scutcheon which is gathered from the Cyen of a tree whose fruit is sower, must be cut in square form, and not in the plain faction of a Scutcheon. It is ordinary to graft the sweet Quince-Tree, bastard Peach-tree, Apricock-tree, Jujube-tree, sower Cherry-tree, sweet Cherry-tree, and Chestnut-tree, after this fashion, howbeit they may be grafted in the cleft more easily, and more profitably ; although divers be of a contrary opinion, as thus : Take the grafts of sweet Quince-tree, and Bastard Peach-tree, of the fairest wood, and best sed that you can find, growing upon the wood of two years old, because the wood is not so firm and solid as the others, and you shall graft them upon small Plum-tree stocks, being of the thickness of ones thumb ; these you shall cut after the manner of a Goats foot : you shall not go about to make the cleft of any more sides then one, being about a foot high from the ground ; you must open it with your small wedge ; and being thus grafted, it will seem to you that it is open but of one side ; afterward you shall wrap it up with a little Moss, putting thereto some gummed Wax, or Clay, and bind it up with Oziers to keep it surer, because the stock is not strong enough it self to hold it, and you shall furnish it every manner of way, as others are dealt withall ; this is most profitable.

The time of Grafting.

All Months are good to graft in, (the Month of *October* and *November* onely excepted) But commonly, graft at that time of

the winter, when the sap beginneth to arise.

In a cold Country graft later, in a warm Country earlier.

The best time generally is from the first of February, untill the first of May.

The grafts must always be gathered in the old of the Moon.

For grafts choose shoots of a year old, or at the furthermost two years old.

If you must carry grafts far, prick them into a Turnip newly gathered, or lay earth about the ends.

If you set stones of Plums, Almonds, Nuts, or Peaches: First, let them lye a little in the Sun, and then steep them in Milk or Water three or four dayes, before you put them into the earth.

Dry the Kernels of Pippins, and sow them in the end of November.

The stone of a Plum-tree must be Set a foot deep, in November or February.

The Date-stone must be Set the great end downwards, two cubits deep in the earth, in a place enriched with dung.

The Peach-stone would be set presently after the Fruit is eaten, some quantity of the flesh of the Peach remaining about the stone.

If you would have it to be excellent, graft it afterward upon an Almond-tree.

The little Cyens of Cherry-trees, grown thick with hair, sots, and those also which do grow up from the Roots of the great Cherry-trees, being removed, do grow better and sooner then they which come of stones; but they must be removed and planted, while they are but two or three years old, the branches must be lopped.

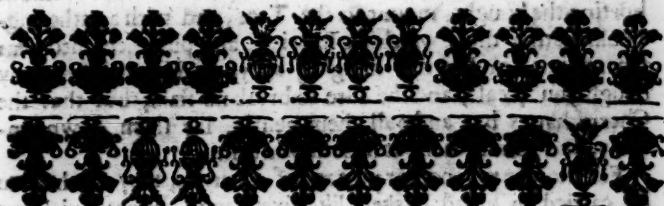
A very profitable Invention, for the speedy Planting of an Orchard of Fruit-Trees.

ABout the end (or rather the middle) of June, the sap being then in the boughs or Tops of the Trees, let some one of discretion go up into the boughs of the Tree intended, and with a keen-knife cut the bark of some smooth bough, so chosen, round about the same, quite through the same bark, to the very bare wood, in two places, (toward the but of the bough) a full hand breadth the one from the other, and take off the bark clean clearly from the said bough, and cast it away, and wipe the sap off that bared place; Then take some of the stiffest clay you can have, and wrap it hard, round about the said bared place, (that it may stop the sap when it descendeth;) bind on this clay with fallow string, or the like, very hard; let this clay be two inches thick at least. Then prepare a certain quantity of good rank mould, tempered with short muck and misken water, and make mortar thereof, and wrap a good quantity of it as big as a foot-ball, upon the firm bark remaining close above the said clay, that it may touch the same; put moss upon it, and, as before, bind it well, and so let it continue growing upon the same Tree till February. Then with a fine saw carefully take off the said bough close below the clay, not perishing the upper mortar, and set that bough, with the clay and mortar on it, in some good ground, and there let it remain to grow; for the sap it cannot pass downward for the clay, but stayeth in the upper mortar, and breeds roots, and possibly (God willing) may bear fruit the next Summer following. Thus you may order many such boughs as aforesaid, and quickly plant an Orchard of bearing Trees. If the bough be as big as the small of ones leg, it is so much the better: *probatum est.*



The Contents of the ART of Propagating Plants.

T HE Art of Propagating	Inoculation in the Bark.
Plants.	95.
Grafting in the Bark.	95.
Grafting in the cleft.	96.
Grafters tools.	
Time of Planting and Setting.	
Time of grafting.	
How to cut the stumps in grafting.	
Sprouts and imps.	
Grafting like a Scutcheon.	98.
	Emplaster-wise grafting.
	To prick sticks to bear the first year.
	To have Cherries or Plums without stones.
	To make Quinces great.
	To set stones of Plums.
	Dates, Nuts, and Peaches.
	To make fruit smell well.
	To plant Cherry-trees.



THE HUSBAND-MAN'S Fruitful Orchard.

FOR

The true ordering of all sorts of Fruits
in their due seasons; and how double increase
comes by care in gathering year after year: as also
the best way of carrying by land or by water, with
their preservation for longest continuance.

OF all Stone Fruit, Cherries are the first to be gathered: of which, though we reckon four sorts, *English, Flemish, Gascon,* and *Black*, yet are they reduced to two, the early, and the ordinary: the early are those whose grafts came first from *France* and *Flanders*, and are now ripe with us in *May*; the ordinary is our own natural Cherry, and is not ripe before *June*: they must be carefully kept from Birds, either with nets, noise, or other industry.

They

Gathering of
Cherries.

They are not ripe all at once, nor may be gathered at once, therefore with a light Ladder, made to stand of it self without hurting the boughs, mount to the Tree, and with a gathering-hook, gather those which be full ripe, and put them into your Cherry-pot, or Kybze hanging by your side, or upon any bough you please, and be sure to break no stalk, but that the Cherry hangs by, and pull them gently, lay them down tenderly, and handle them as little as you can.

To carry
Cherries.

For the conveyance or portage of Cherries, they are best so be carried in broad Baskets like fives, with smooth yielding bottoms, only two broad laths going along the bottom; and if you do transport them by ship, or boat, let not the fives be filled in the top, lest setting one upon another, you bruise and hurt the Cherries; if you carry by horse-back, then panniers well lined with Fern, and packt full and close, is the best and safest way.

Other stone-
fruit.

Now for the gathering of all other stone-fruit, as Nectarines, Apricocks, Peaches, Pear Plums, Damsons, Bullis, and such like, although in these several kinds, they seem not to be ripe at once on one Tree; yet when any is ready to drop from the Tree, though the other seem hard, yet they may also be gathered, for they have received the full substance the Tree can give them, and therefore the day being fair, and the dew drawn away, set up your Ladder, and as you gathered your Cherries so gather them: only in the bottom of your large fives, where you part them, you shall lay Nettles, and likewise in the top, for that will ripen those that are most unready.

Gathering of
Pears.

In gathering of Pears are three things observed, so gather for expense, for transportation, or so sell to the Apothecary. For expense, and your own use, then gather them as soon as they change, and are as it were half ripe, and not more but those which are changed, letting the rest hang till they change also: for thus they will ripen kindly, and not rot so soon. If they were full ripe at the gathering. But if your Pears be to be transported far, either by Land or Water, then pull one from the Tree, and cut it in the middle, and if you find it hollow about the coar, and the kernel a large space to lie in, although no Pear

be ready to drop from the Tree, yet then they may be gathered, and then laying them on a heap one upon another, as of necessity they must be for transportation, they will ripen of themselves, and eat kindly : but gathered before, they will wither, shrink, and cat rough, losing not only their taste, but beauty.

Now for the manner of gathering, albeit some climb into the trees by the boughs, and some by Ladder, yet both is amiss ; the best way is with the Ladder before spoken of, which standeth of it self, with a basket and a line, which being full, you must gently let down, and keeping the string still in your hand, being emptied, draw it up again, and so finish your labour, without troubling your self or hurting the tree.

Now, touching the gathering of Apples, it is to be done according to the ripening of the fruit; your Summer-Apples first, Gathering of Apples. and the Winter after.

For Summer fruit, when it is ripe, some will drop from the Tree, and Birds will be pecking at them : But if you cut out one of the greenest, and find it as was shew'd you before of the Pear, then you may gather them, and in the house they will come to their ripeness and perfection. For your Winter-fruit, you shall know the ripeness by the observations before shewed ; but it must be gathered in a fair, sunny, and dry day, in the wane of the Moon, and no Wind in the East, also after the dew is gone away ; for the least wet or moisture will make them subject to rot and mildew ; also you must have an apron to gather in, and to empty into the great basket, and a hook to draw the boughs unto you, which you cannot reach with your hands at ease : The apron is to be an ell every way, loopt up to your girdle, so as it may serve for either hand without any trouble ; and when it is full, unloose one of your loops, and empty it gently into the great Basket, for in throwing them down roughly, their own stalks may prick them, and those which are prickt, will ever rot. Again, you must gather your fruit clean without leaves or brunts, because the one hurts the Tree, for every brunt would be a stalk for fruit to grow upon ; the other hurts the fruit by bruising, and pricking it, as it is laid together, and there is nothing sooner rotteth fruit,

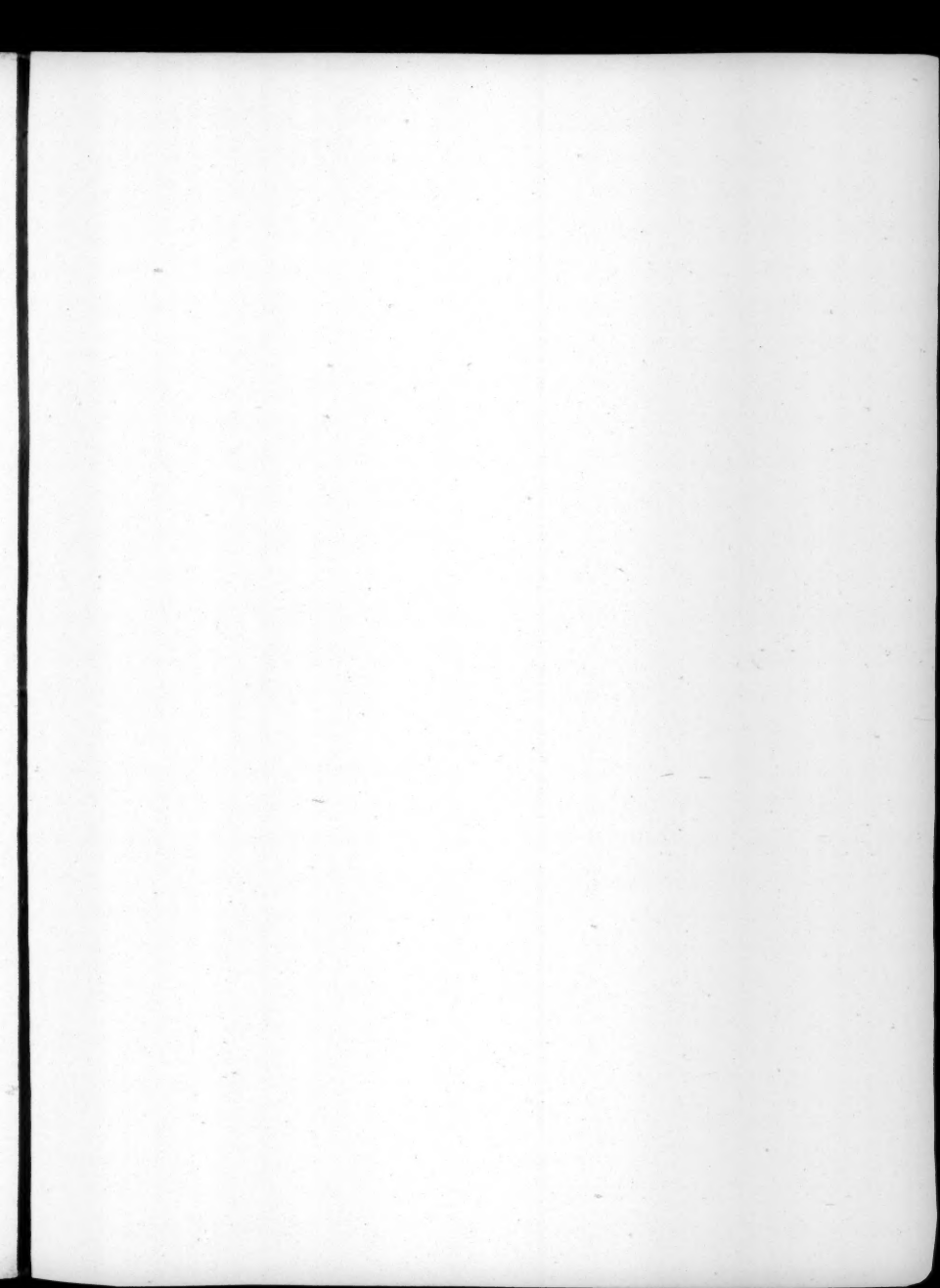
fruit, then the green and withered leaves lying among them ; neither must you gather them without any stalk at all : for such fruit will begin to rot where the stalk stood.

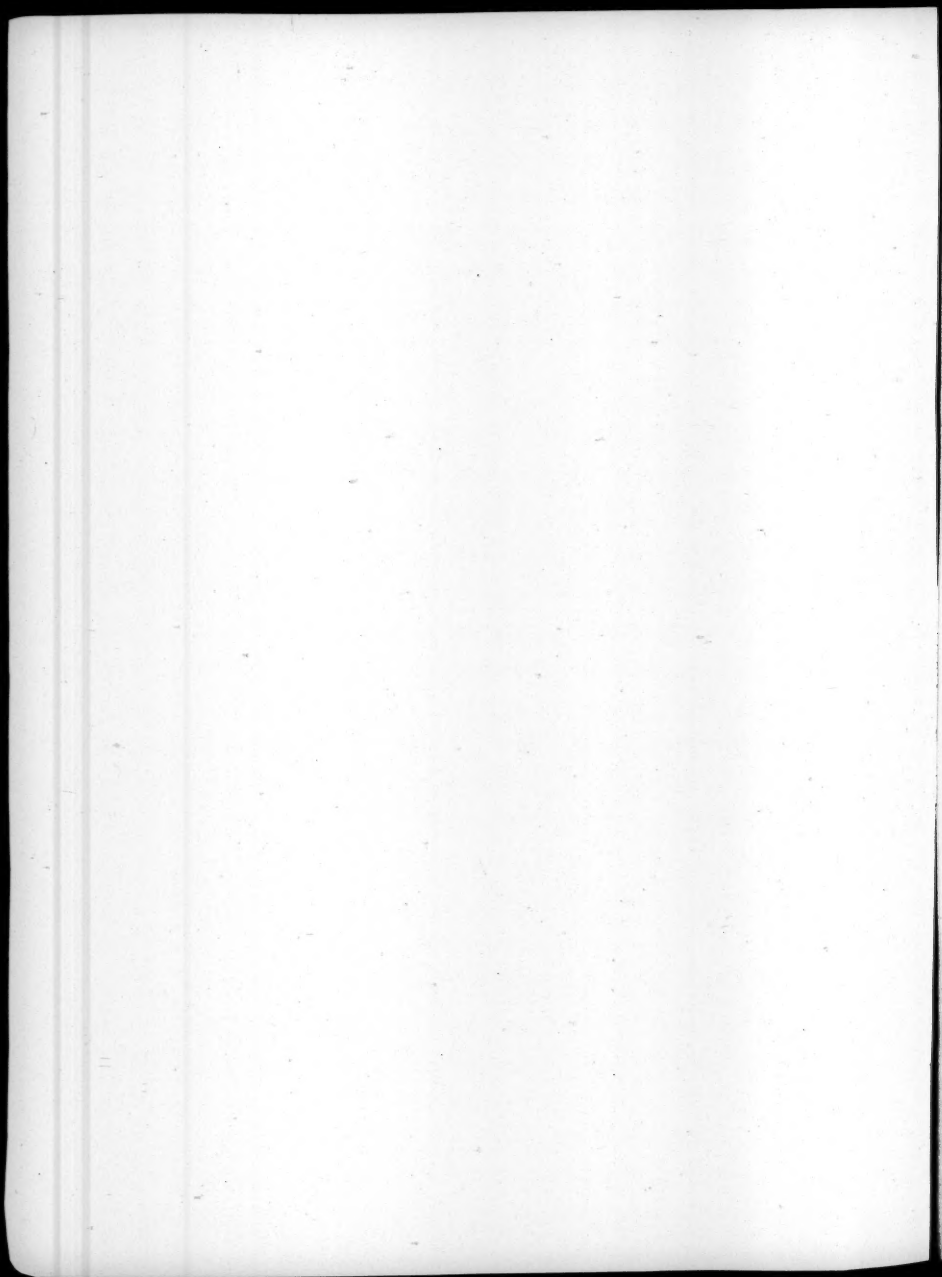
To use the
fallings.

For such fruit as falleth from the Trees, and are not gathered, they must not be laid with the gathered fruit ; and of fallings there are two sorts, one that falls through ripeness, and they are best, and may be kept to bake or roast : the other wind-falls, falling before they are ripe, and they must be spent as they are gathered, or else they will wither and come to nothing ; and therefore it is not good by any means to beat down fruit with Poles, or to carry them in Carts loose and jogging, or in sacks where they may be bruised.

Carriage of
fruit.

When your fruit is gathered, you shall lay them in deep Baskets of Wicker, which shall contain four or six Bushels, and so between two men, carry them to your Apple-Loft, and in shooting, or laying them down, be very careful that it be done with all gentleness and leisure, laying every sort of fruit severally by it self ; but if there be want of room, having so many sorts that you cannot lay them severally, then some such fruit as is nearest in taste and colour, and of Winter-fruit, such as will taste alike, may, if need require, be laid together, and in time you may separate them, as shall be shewed hereafter. But if your fruit be gathered far from your Apple-loft, then must the bottoms of your Baskets be lined with green Fern, and draw the stubborn ends of the same through the Basket, that none but the soft leaf may touch the fruit, and likewise cover the tops of the Baskets with Fern also, and draw a small cord over it, that the Fern may not fall away, nor the fruit scatter out, or jogg up and down ; and thus you may carry fruit by Land, or by Water, by Boat, or Cart, as far as you please : and the Fern doth not only keep them from bruising, but also ripens them, especially Pears. When your fruit is brought to your Apple-Loft, or store-house, if you find them not ripened enough, then lay them in thicker heaps upon Fern, and cover them with Fern also : and when they are near ripe, then uncover them, and make the heaps thinner, so as the air may pass through them ; and if you will not hasten the ripening of them, then lay them on the boards with-
out





out any Fern at all. Now for Winter, or long lasting Pears, they may be packt either in Fern or Straw, and carried whither you please; and being come to the journies end, must be laid upon sweet straw : but beware the room be not too warm, nor windy, and too cool, for both are hurtfull : but in a temperate place, where they may have air, but not too much.

Wardens are to be gathered, carried, packt, and laid as Win- Of Wardens.
ter Pears are.

Medlers are to be gathered about *Michaelmas*, after the frost Of Medlers.
hath toucht them : at which time they are in their full growth, and will then be dropping from the tree, but never ripe upon the tree. When they are gathered, they must be laid in a basket, sieve, barrel, or any such cask, and wrapt about with woollen cloaths, under, over, and on all sides, and also some weight laid upon them, with a board between : for except they be brought into a heat, they will never ripen kindly, or taste well.

Now when they have lain till you think some of them be ripe, the ripest, still as they ripen, must be taken from the rest ; therefore powr them out into another sieve or basket leisurely, that so you may well find them that be the ripest, letting the hard ones fall into the other basket, and those which be ripe laid aside : the other that be half ripe sever also into a third sieve or basket ; for if the ripe and half ripe be kept together, the one will be mouldy, before the other be ripe. And thus do till all be thoroughly ripe.

Quinces should not be laid with other fruit ; for the scent is Of Quinces.
offensive both to other fruit, and to those that keep the fruit or come amongst them ; therefore lay them by themselves upon sweet straw, where they may have air enough ; they must be packt like Medlers, and gathered with Medlers.

Apples must be packt in Wheat or Rye straw, and in maunds or To pack
baskets loined with the same, and being gently handled, will Apples.
ripen with such packing and lying together. If severall sorts of
apples be packt in one maund or basket, then between every sort
lay sweet straw of a pretty thickness.

Apples must not be powred out, but with care and lei- Emptying and
sure : first, the straw pluckt clean from them, and then gently laying apples.

take out every severall sort, and place them by themselves: but if for want of room you mix the sorts together, then lay those together that are of equal lasting; but if they have all one taste, then they need no separation. Apples that are not of like colours should not be laid together, and if any such be mingled, let it be amended, and those which are first ripe, let them be first spent, and to that end, lay those apples together, that are of one time of ripening; and thus you must use Pippins also, yet will they endure bruises better than another fruit, and whilst they are green will heal one another.

Difference in
fruit.

Pippins though they grow of one tree, and in one ground, yet some will last better than other-some, and some will be bigger then others of the same kind, according as they have more or less of the Sun, or more or less of the droppings of the trees or upper branches: therefore let every one make most of that fruit which is fairest and longest lasting. Again, the largeness and goodness of fruit consists in the age of the tree; for as the tree increaseth, so the fruit increaseth in bigness, beauty, taste, and firmness: and otherwise as it decreaseth.

Transporting
fruit by water.

If you be to transport your fruit far by water, then provide some dry hogheads or barrels, and pack in your apples, one by one, with your hand, that no empty place may be left, to occasion fogging; and you must line your vessel at both ends with fine sweet straw, but not the sides, to avoid heat; and you must then bore a dozen holes at either end, to receive air so much the better, and by no means let them take wet. Some use, that transport beyond seas, to shut the fruit under hatches upon straw; but it is not so good, if casks may be gotten.

When not to
transport fruit.

It is not good to transport fruit in *March*, when the wind blows bitterly, nor in frosty weather, neither in the extreame heat of Summer.

To convey
small store of
fruit.

If the quantity be small you would carry, then you may carry them in doffers or paniers, provided they may be ever filled close; and that Cherries and Pears be lined with green Fern, and Apples with sweet straw; and that, but at the bottoms and tops, not on the sides.

Rooms for
fruit.

Winter fruit must lye neither too hot, nor too cold, too close, nor too open; for all are offensive. A low Room or Cellar that

That is sweet, and either boarded or paved, and not too close, is good from *Christmas* till *March*; and Rooms that are seiled over-head, and from the ground, are good from *March* till *May*, then the Cellar again, from *May* till *Michaemas*. The apple-leaf would be seiled or boarded, which if it want, take the longest Rye-straw, and raise it against the walls, to make a fence as high as the fruit lyeth, and let it be no thicker than to keep the fruit from the wall, which being moist, may do hurt; or if not moist, then the dust is offensive.

There is some fruit which will last but untill *Allballantide*; Sorting of fruit. they must be laid by themselves; then those which will last till *Christmas*, by themselves; then those which will last till it be *Candlemas*, by themselves; those that will last till *Shrove-tide*, by themselves; and Pippins, Apple-Johns, Pear-mains, and Winter Russetings, which will last all the year, by themselves.

Now if you spy any rotten fruit in your heaps, pick them out; and with a Tray for the purpose, see you turn the heaps over, and leave not a tainted Apple in them; dividing the hardest by themselves, and the broken skinned by themselves to be first spent, and the rotten ones to be cast away; and ever as you turn them, and pick them, under-lay them with fresh straw: thus shall you keep them for your use, which otherwise would rot suddenly.

Pippins, John-Apples, Pear-mains, and such like long lasting Time of stirring fruit. fruit, need not to be turned till the week before *Christmas*, unless they be mixt with the other of riper kind, or that the fallings be also with them, or much of the first straw left amongst them: the next time of turning is at *Shrove-tide*, and after that once a month till *Whitsun-tide*, and after that, once a fortnight; and ever in the turning lay your heaps lower and lower, and your straw very thin: provided you do none of this labour in any great frost, except it be in a close Cellar. At every thaw, all fruit is moist, and then they must not be touched: neither in rainy weather, for then they will be dank also; and therefore at such seasons it is good to set open your windows and doors, that the air may have free passage to dry them, and at nine of the clock in the forenoon in Winter, and at six in the forenoon, and

and at eight at night in Summer, only in March open not your windows at all.

All lasting fruit, after the midst of May, begin to whither, because then they wax dry, and the moisture gone which made them look plump, they must needs whither, and be small; and nature decaying, they must needs rot. And thus much touching the ordering of Fruits.

FINIS.

